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POSTER PRESENTATION – ABSTRACTS

BOALA PARKINSON ŞI ALTE TULBURĂRI ALE COMPORTAMENTULUI MOTOR / *PARKINSON'S DISEASE AND OTHER MOVEMENT DISORDERS*

Exploring functional tremor: A case presentation

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S.M. 62 years old woman, known with arterial hypertension and vascular epilepsy treated with carbamazepine (201ac7), was admitted in June 2018 for evaluation of involuntary movements in the lower limbs, the upper right limb and the head, with intermittent and variable duration, without loss of consciousness or sphincter relaxation, occurring in the last year with progressive evolution in the last two weeks.

Neurological examination did not reveal any pathological signs. Cerebral CT scan showed cortical atrophy and bilateral lacunar strokes. Neurocognitive testing revealed hypomnesia of fixation and evocation, spontaneous and voluntary hypoprosexia, MMSE 23/30, and Beck Depression Inventory had a score of 42/63.

The EEG examination revealed alpha rhythm, low voltage, and biologically we diagnosed diabetes mellitus with indication of compliance for a hypoglycemic diet. Following the direct observation of the patient, it was found that tremor could be completely suppressed by voluntary control, without a characteristic pattern, so that the symptoms were interpreted as most likely in a functional context; however, it has been decided to maintain anticonvulsant therapy with carbamazepine 900 mg/day, which also has a mood stabilizer effect, beneficial for affective disorder and it has been associated an SSRI antidepressant (sertraline).

Patient recame in clinic in November 2018 for the recurrence of involuntary movements, along with many pain somatoform symptoms, but no organic evidence was revealed, so it was decided to increase the SSRI antidepressant dose and to associate an atypical antipsychotic drug (quetiapine) with discrete improvement of mood, but also of motor phenomena.

Vegetative symptoms in Parkinson's disease

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Objectives. This study investigates the presence of vegetative disorders in Parkinson's disease patients, depending on the form of the disease, the modified Hoehn and Yahr stage and the age of the disease.

Materials and method. We examined 95 patients with Parkinson's disease and used the SCOPA-AUT (Scales for Outcomes in Parkinson's Disease – Autonomic) questionnaire, the NMSS (Non-Motor Symptom Assessment Scale for Parkinson's disease) scale and measured blood pressure orthostatism to track orthostatic hypotension.

Results. Vegetative disorders evolve concurrently with general non-motor disorders, results of the SCOPA-AUT questionnaire correlate statistically significantly with the NMSS score. Depending on the form of the disease, there are statistically significant differences, patients with the mixed form of the disease present a more significant impairment of the vegetative nervous system. Depending on the modified Hoehn and Yahr status, there are statistically significant differences, the SCOPA-AUT and NMSS scores increase at the same time as progressing to a more advanced stage of disease. The group of patients with disease severity between 5 and 10 years presents the highest average score.

Conclusions. A more significant impairment of the vegetative nervous system among Parkinson's disease patients is seen in those with mixed disease, a more ad-

vanced Hoehn and Yahr stage and a disease age of 5 to 10 years.

Keywords: Parkinson's disease, vegetative disorders, non-motor symptoms

The relationship between clinical motor subtypes and non-motor symptoms in Parkinson's disease

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Introduction. Parkinson's disease (PD) is a neurodegenerative disorder, with a progressive course, which has a broad array of clinical features. Many movement disorders specialists have suggested that PD can be classified as tremor-dominant phenotype, postural instability and gait difficulty (PIGD) or indeterminate phenotype.

Objective. The aim of our study was to evaluate the relationships between motor phenotypes and non-motor subtypes in patients with Parkinson's disease.

Material and methods. 31 patients with PD were included in our study. The severity of the disease was assessed by Hoehn & Yahr scale. Each patient was evaluated using Unified Parkinson's Disease Rating Scale (UPDRS) part III and included in a different phenotype: items 20, 21 for tremor; item 22 for rigidity, items 23, 24, 25, 26 and 31 for bradykinesia; items 27, 28, 29, 30 for PIGD. For non-motor symptoms, patients were evaluated using Non-Motor Symptoms Questionnaire (NMSQ). The relationship between non-motor symptoms (NMS) burden, the PD subtypes and the prevalence of each NMS among different PD motor subtype were statistically analyzed using IBM SPSS Statistics V20.

Results. In our group, it was a positive correlation between scores on UPDRS III and NMSQ. The patients with PIGD phenotype had a higher NMS burden, but there was no correlation between NMS and tremor scores. Also, PIGD phenotype had a higher prevalence in the majority of NMS domains when compared with the other phenotypes.

Bilateral ballismus post resuscitated cardiac arrest

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Ballismus is a very rare movement disorder, represented by involuntary, repetitive movements of the limbs, of great amplitude. Symptoms may diminish in intensity during sleep, and the more active the patient is, the more violent the movements are. Ballismus can be seen as a severe handicap.

The main cause of ballismus, in most cases, it's represented by a decrease in the activity of the subthalamic nucleus of the basal ganglia, resulting in the occurrence of ballistic, involuntary movements of the limbs. It can also occur rarely due to metabolic abnormalities.

The purpose of this paper is to present a case of bilateral ballismus movements that occurred after cardiorespiratory resuscitation.

Case presentation. A 65-year-old male, known as hypertensive and diabetic, is found at home in cardiac arrest due to ventricular fibrillation. He responded to resuscitation maneuvers, and on arrival at the hospital, the patient was comatose, GCS 3 points, intubated and mechanically ventilated. After 3 days, the state of consciousness is resumed, occasionally revealing the presence of involuntary movements of the upper limbs, of great amplitude. Cerebral CT at presentation and revaluation are within normal limits. Two weeks after the event, the patient shows improvement in movements, but without their disappearance.

Conclusion. Bilateral ballismus is a very rare complication of post resuscitation cerebral hypoxia and it represents a therapeutic challenge.

Repetitive transcranial magnetic stimulation therapy in Parkinson's disease – case presentation

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Objectives. There are numerous studies in the literature that emphasize the effect of repetitive transcranial magnetic stimulation (rTMS) in Parkinson's disease (PD), by reducing the motor impairment. We present here the clinical evolution of a PD patient, treated with rTMS.

Methods. A 65 years old female patient, diagnosed with stage III Parkinson's disease three years ago, without any specific medical therapy, presented in our clinic for an alternative approach of her treatment. Our initial evaluation showed a motor UPDRS score of 40 points, a Parkinson's disease sleep scale (PDSS) score of 90 and a Beck Depression Inventory (BDI) of 28 points. We also performed an eye tracking investigation to measure her saccadic parameters.

We applied a rTMS protocol consisting of ten daily sessions of high frequency stimulation on M1 area of both hemispheres, using an eight-shaped coil.

Results. After 1 month, the scores of UPDRS part III (motor score) decreased from 40 to 27. Also, our patient confirmed the notable improvement of the gait speed and the motor skills. Moreover, the non-motor symptoms like sleep and mood disturbances were significantly better – the PDSS score was 117 and the BDI score was 15 (mild mood disturbance). The eye-tracking results pointed out a decrease of the number of square-wave jerks and a positive trend regarding the values of saccadic latency, speed and amplitude.

Conclusions. Our results confirm the published data regarding the antiparkinsonian effects of rTMS on motor symptoms. We consider that rTMS could be an appropriate treatment for selected patients.

Clinical overlap in atypical parkinsonian syndromes – illustrated in a Lewy body disease case report

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Introduction. The diagnosis of Lewy body disease is essentially based on neurocognitive impairment, having visual hallucinations, parkinsonism and REM sleep behavior disorder as core clinical features. Dysautonomia is a supportive clinical feature in all *alpha synucleinopathies, being specific for* multiple system atrophy.

Case oresentation. A 66-year old male patient is admitted to our clinic for sudden onset non-fluent aphasia. Within the past year, he developed dysphagia, dysphonia and aphasic episodes; digestive pathology and cervical tumors were excluded. The bronchoscopic exam showed left vocal cord paralysis.

The clinical examination finds symmetrical parkinsonian syndrome (bradykinesia and rigidity), solid and liquid dysphagia, symptomatic orthostatic hypotension and non-fluent aphasia (*which* spontaneously disappears within 24 hours). The initial CT scan excludes an acute vascular event. The cerebral MRI displays cerebral and cerebellar diffuse atrophy and bilateral periventricular leukoaraiosis. The neoplastic screening consisting of onconeural antibodies, thoracic and abdominal CT, is negative. We found moderate impairment at the neurocognitive function evaluation. The barium examination of the gastrointestinal tract demonstrates hypomotility of the esophagus and the sympathetic skin response is absent in the right foot. The patient does not cooperate during the polysomnography, but his family describes symptoms suggestive of REM sleep behavior disorder; during his hospital stay, he develops visual hallucinations. The patient has a partial Levodopa response.

Discussion. The severe dysautonomia may favour the diagnosis of multiple system atrophy, but the cerebral imaging is not compatible with it. The disease progresses with the emergence of specific Lewy body disease clinical traits, thus revealing this diagnosis.

Keywords: Lewy body disease, dysautonomia, neurocognitive impairment

Secondary reversible parkinsonism

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Secondary parkinsonism refers to a group of disorders that have features similar to those of Parkinson´s disease, but have a different etiology. Obstructive hydrocephalus is one of the rare causes, which gives symptoms by nigrostriatal compression. The parkinsonian syndrome and sphincterian incontinence are the main characteristics, but can also include other clinical features.

The purpose of this paper is to present a case of a secondary reversible parkinsonism, after ventriculoperitoneal shunt, for obstructive hydrocephalus.

Case presentation. 64 years old right handed female, without significant medical history, presents with postural instability, gait disturbance and cognitive impairment, symptoms with rapid progression, which started 6 weeks before. The neurological exam showed a confused patient, with mild bilateral bradykinesia, left axial dystonia, unsteady wide based gait, funny turns, loss of recent memory and a MMSE of 12 points. The MRI investigation revealed the diagnosis of obstructive hydrocephalus. A ventriculoperitoneal shunt was performed, with the remission of the parkinsonian syndrome and mild persistence of memory loss.

Conclusion. Obstructive hydrocephalus is a rare case of secondary reversible parkinsonian syndrome, with intense phenomenology which mainly affects the postural stability and the gait.

Genetically proven myotonic dystrophy, parkinsonism and sleep disordered breathing: A novel form of neurodegenerative disease, myotonic-parkinsonism complex?

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Introduction. Myotonic dystrophy (DM) is a genetic disorder that causes both muscle dystrophy and myotonia along with multisystemic involvement. To date, there has been one reported case of genetically proven DM type 1 with parkinsonism. This may not be just a coincidence. Previous neuropathological reports have shown marked cell loss and presence of Lewy bodies in the Substantia Nigra.

Case reports. We report 4 cases of myotonic dystrophy with parkinsonism. All patients were males with a mean age of 52.5. They had varying degrees of clinical manifestations of DM. They also had clinical signs of parkinsonism: resting tremor, rigidity, bradykinesia. Needle electromyography confirmed myotonic discharges in proximal and distal muscles. Genetic testing with triplet-primed PCR method showed heterozygosity for DM1: a mutant allele with more than 80 CTG repeats. A polysomnography was consistent with sleep-disordered breathing, with both obstructive and central apnoeas, with a mean AHI of 36,17/h. A levodopa trial showed marked improvement in 1 patient and moderate improvement in 2 patients.

Conclusion. Parkinsonism has been reported in both DM type 1 and 2. Further research is required to understand the relationship. We suggest that this may be a new form of neurodegenerative disorder: myotonic-Parkinson complex.

Surgical complications of a patient with advanced Parkinson's disease treated with intravenous levodopa + carbidopa – a case report

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Introduction. Parkinson's disease is a neurodegenerative disease, second after Alzheimer's disease. The non-invasive treatment used in Parkinson's disease is based on multiple drug association. In advanced Parkinson's disease, with severe motor fluctuations, non-responsive to drug therapy, intrajejunal administration of levodopa-carbidopa is indicated.

Materials and methods. We present the case of a 57-year-old patient, with Parkinson's disease, stage 4, Hoehn and Yahr, diagnosed in 2010 at the 1st Neurology Clinic of the Cluj-Napoca County Emergency Clinical Hospital.

Results. The patient is treated with intravenous levodopa-carbidopa from 2015. In October 2018 he is admitted in the clinic for re-evaluation. Considering the

erythematous margins of gastrostomy, gastroscopy is indicated, which reveals completely impaired gastrostomy in the gastric wall. It was not possible to replace the gastrostomy compounds. Further, a surgical interventions was preformed in order to replace the deterioreted gastrostomy, with no succes, and an abdominal-pelvic contrast tomography computer was indicated. A radio-opaque mass, with a homogeneous surface, with a 26 mm diameter circular contour, at the level of the cecum, with the meaning of the gastrostoma resting head, is highlighted. It is then eliminated in stool. Because the intravenous administration of the medication was temporarily stopped, Isicom 1.625 mg/day was administered. In December 2018, the intrajejunal PEG-J probe is again mounted and intrajejunal levodopa-carbidopa administration is continued with favorable evolution.

Conclusion. The particularity of the case is represented by the need for surgical invasive surgery to diagnose and treat a rare complication of Parkinson's disease with intrajejunal levodopa-carbidopa treatment.

Prevalence of gastrointestinal comorbidities in Parkinson's disease patients

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Even Parkinson's disease (PD) is clinically characterised mainly by motor symptoms, it is also associated with a wide range of non-motor symptoms as well as a number of related comorbid conditions.

A clinical, cross-sectional, observational study has been performed on a group of 86 consecutive patients with idiopathic Parkinson's disease. The patients and their caregivers have been asked about disease duration, associated medical conditions and current medications. Subsequently, the subjects have been assessed using the Scale for Outcomes in Parkinson's Disease for Autonomic Symptoms (SCOPA-AUT) as a self-administered questionnaire.

The overall assessed prevalence of gastrointestinal comorbidities was 46.51% (95% CI 35.9-57); the most prevalent gastrointestinal co-morbidities were chronic gastritis/gastro-duodenitis (16.27%, 95%CI 8.47-24.07), chronic constipation (8.13%, 95%CI 2.35-13.91) and gastric / duodenal ulcer (4.65%, 95% CI 0.2-9.1).

A statistically significant superior proportion of the women with PD included in this study reported gastrointestinal comorbidities compared to men. No statistically significant correlation has been observed between the prevalence of gastrointestinal comorbidities and disease duration in the assessed PD patients. Interestingly, in our study, chronic constipation has been reported by only 8.13% of the interviewed PD patients as a known / previously diagnosed associated medical condition, but analysing the answers to the questions regarding the frequency of bowel movements from the SCOPA-AUT scale, it can be noticed that, in fact, as much as 66.3% (95% CI 56.3-76.3) of the subjects experienced constipation, with variable frequency.

Essential tremor – easy diagnosis, frequent mistakes

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Objectives. Establishing a correct diagnosis, analyzing the clinical phenomenology, analyzing the results of a specific therapeutic approach and highlighting the impact of essential tremor (ET) on the quality of life (QoL).

Materials and methods. The study was carried out by tracking a group of 20 pacients diagnosed with ET in the Colentina Neurology Clinic during two follow-up visits at one month interval. We used a personal file specially designed for the study, the neurological examination, laboratory tests, imaging tests, writing and drawing samples of Archimede's spiral, determining the frequency of the tremor with LiftPulse 2.0, QUEST questionnaire, scores on the TETRAS scale.

Results. We conducted a prospective study on a group of 20 patients (12 men and 8 women), with an average age of 63.9 years old. Out of this group only 8 were correctly diagnosed, 7 were diagnosed and treated for Parkinson's disease and 5 were de novo patients. The tremor frequency, measured with LiftPulse, varied between 5 and 8 Hz, with an average of 6.25 Hz. The QUEST questionnaires revealed that the most affected domains of quality of life are physical and psychosocial conditions. Under proper treatment with Propranolol and/or Primidone, the evolution was favorable, verified by quick, easy and inexpensive writing tests, Archimedes spiral drawing and neurological examination.

Discussions. Diagnostic mistakes could be avoided by increasing the time spent with the patient and knowing the new consensus of 2017 on TE diagnostic criteria. An adequate diagnosis and treatment improves the quality of life in over 50% of patients.

Comorbidities in patients with advanced Parkinson's disease treated with intrajejunal levodopa-carbidopa

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Introduction. Due to the increase in average life expectancy of the population over the last decades, the incidence and prevalence of degenerative diseases has increased. Parkinson's disease (BP) is one of the most common neurodegenerative diseases affecting about 1% of the population over 60 years of age. The medical, social and economic impact is increasingly complex, owing to both motor and non-motor symptoms of the disease and associated comorbidities.

Studies show that damage to the vegetative nervous system as well as neuropsychiatric complications, particularly dementia and depression, correlate with the progression of the disease, its severity and the mortality rate. The CCI scale (the Charlson Index of Comorbidity) has proven to be a useful way to assess the impact of comorbidities on quality of life, hospitalization and mortality in BP. In a study published by Macleod et al. (2016), CCI indexing suggested that the load of associated pathologies at the clinical onset of the disease is associated with increased mortality, but in advanced stages it is associated with complications due to disease progression and / or comorbidities occurring on the way. BP treatment in advanced stages is a challenge for the neurologist, and intravenous levodopa / carbidopa gel therapy can be beneficial in terms of correct indication, complex follow-up, and less important comorbidities.

Material. We present the data of a preliminary study, which included a group of 15 patients undergoing neurology clinic I Cluj-Napoca with the diagnosis of advanced stage Parkinson's disease treated with intravenous levodopa-carbidopa.

Results. Among the mentioned comorbidities in the patients we take into account the following: essential hypertension (5), atrial fibrillation (1), mild cognitive impairment (10); dementia (2); depression (10); acute psychosis (8), diabetes mellitus (2), gastric ulcer (10); meningioma (1). Three deaths were recorded in the target group. The CCI index was calculated and correlated with the number and duration of hospitalizations, mortality, duration and severity of BP.

Conclusion. The psychiatric comorbidities had the highest frequency in the patients studied and the CCI scale could be useful for establishing the prognosis of the disease.

SCLEROZA MULTIPLĂ ŞI ALTE BOLI DEMIELINIZANTE / *MULTIPLE SCLEROSIS AND OTHER DEMYELINATING DISORDERS*

Clinical biomarkers in the evolution of multiple sclerosis treated with interferon beta1b – benign multiple sclerosis or good treatment responders?

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Introduction. The evolutive aspects of multiple sclerosis (MS) make finding new clinical biomarkers a worthwhile study. Due to some patients experiencing a rather imperceptible course, a controversial term of benign-MS(BMS) appeared. Interferon-β1b(IFNβ1b) was the first immunomodulating agent approved for the treatment of MS, more than two decades ago.

Material and methods. 26 patients with a disability score (EDSS) ≤ 2.0, treated more than 10 years with IFNβ1b were included. The evaluation included the relapse frequency before and after treatment, symbol-digit-modalities-test (SDMT) and Hamilton Depression Rating scale(HAM-D). The onset was noted as per their affected functional system: Optic (O), Sensibility (S), Cerebellar (C), Pyramidal (P), Brainstem (B) and multifocal (M).

Results. The average treatment time was 12.85±2.20 years. F:M ratio was 2.25. 11 (42.30%) patients had no more relapses and 23(88.46%) patients had no relapses in the first year of treatment. Most patients presented an onset with B symptoms, 8 (30.76%), followed by S and P, 6 (23.07%). A negative correlation was found between SDMT and HAM-D ($r = -0.416$, $p = 0.034$).

Conclusions. Lack of relapses in the first year following IFNβ1b initiation and the relapse-free status seem to be the most powerful predictors when assessing low

disability patients, together with an onset dominated by B symptoms. While the EDSS score focuses on ambulation, the importance of cognitive evaluation in establishing a benign status is desired. MS has reached an era where untreated cohorts have become obsolete, so the real inquiry is whether we are facing a benign course or our patients are good IFNβ1b responders. Serological and imaging biomarkers will complete the clinical aspects in order to reach a suitable conclusion.

Magnetic resonance spectroscopy and demyelinating lesions: Case presentation

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Magnetic resonance spectroscopy could be a part of classical imagery methods but also offer information about metabolic disturbances in various cerebral disorders.

Case presentation. We present hereby a case of a 59-year-old woman, former smoker and who does not have any pathological antecedents. The patient has presented with cognitive deterioration, the onset of which was insidious. However, there are no signs of other neurological focuses. Initially, the functional nature of cognitive disorders has been considered and therefore the conventional nuclear magnetic resonance and mainly the magnetic resonance spectroscopy have been the ones that solved the etiological diagnosis. The cranio-cerebral magnetic resonance has shown the presence of a supratentorial parietal demyelinating lesion of relatively large size, which has determined several problems concerning the differential diagnosis.

Conclusions. In rare cases, the demyelinating lesions may demand further investigation. Under such circumstances, the magnetic resonance spectroscopy could be used.

Keywords: spectroscopy, nuclear magnetic resonance, demyelinating lesions

Incidence of word retrieval difficulties in MS diagnosed patients

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Background. The aim of this study was to compare the quantitative and qualitative cognitive profile in multiple sclerosis (MS) patients versus matched controls assessing object naming ability, visual memory and new learning tests.)

Material and method. We evaluate 63 patients with MS (45 women, mean age 40,1, DS 8,98) and 21 matched controls in age and level of education, using the CANTAB battery. A BDI-II questionnaire score above 9 was established as the cut off value for signs of depression and anxiety to interfere with the validity of the cognitive results.

Results. Chi square analysis revealed statistically significant differences between the two groups for the word retrieval task – mean correct word naming in MS group vs control – 17.5 (SD 1.29) vs. 23.5 (SD 1.87), p = 0.024.

In terms of general cognitive performances, RVP test evidenced that MS patients failed to respond to target sequences significantly more frequent then control group 19 (1.27) vs. 12 (2.12), p = 0.04.

The MS patients required a higher number of presentations to new information learning 3.55 (SD 0,62) vs. controls 3.22 (SD 0.89) without reaching statistical significance and a higher number of errors before identifying the correct stimulus in the DMS test 4.9 (SD 0.77) vs. 3.33 (SD 0.66), p = 0,1.

Conclusions. Although the results evidenced that the MS patients need more time and many trials to achieve correct results (identifying correct stimulus and correct target sequence) the final scores were matching the control group.

The overall results of this study indicate that the MS patients exhibit language as well as processing speed, attention and visual memory disturbances, but it seems that the cause is due more to the disturbance in acquiring than to retrieving mechanism of new learned information.

Acute disseminated encefalomyelitis of multi-viral ethiology in a young patient

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Introduction. The first signs of ADEM usually include sudden onset encephalopathy (altered consciousness, unexplained behavioral changes, fever, leukocytosis, pleocytosis CSF > 300 elements / mm3). Imagistically, focal cerebral and spinal demyelination is evidenced, with axonal destruction and simultaneous damage to the peripheral nervous system. Encephalopathy associates multifocal neurological symptoms, present after a viral or bacterial infection.

Case presentation. 47-year-old patient, known with chronic stomach, demyelinating sensory-motor polyneuropathy, uncertainty etiology from November 2017, left temporo-insular left hematoma discovered in 2018, short arachnoid lobe temporal cyst discovered in March 2018, bilateral optic neuritis in March 2018, is hospitalized for steady-state disorder, progressive aggravation disorder of approximately one month, tetramelic sensitivity disorder and abdominal distension, tremor of upper right limb, headache, sleep disturbances, nocturnal visual hallucinations. The patient performs cerebral MRI and cervical column showing fronto-temporo-parietal bilateral and midbrain sectional bilaterally diffuse T2 / FLAIR diffuse images up to 10 mm, some enlarged in the calf body and longitudinal myelopathy extended to medulla oblongata level. CSF examination: xanthromic fluid, increased proteinorahia (30g / ml), pleiocytosis (172 leukocytes, of which 164 lymphocytes, 8 neutrophils; 36 erythrocytes). Corticotherapy was administered without improvement in clinical symptoms and escalation of 5 plasmapheresis sedative therapy. The patient relapsed after 2 weeks and repeated 3 times of plasmapherases. The biological and autoimmune profile performed reveals viral markers and contributes to the diagnosis.

Conclusions. There are various clinical presentations for ADEM. Literature advocates a continuity of acute demyelinating diseases in childhood (ADEM) and adult (MS). ADEM occurs very rarely in adults, with rapid progressive progression and death in several weeks, but also are described cases with favorable development. High-dose corticotherapy iv, plasmapheresis, administration of imunglobulin iv or cyclophosphamide, cyclosporins are recognized as therapeutic solutions.

Keywords: polyradiculoneuritis, demyelinating diseases, acute disseminated encephalomyelitis, proteinorahia

Leukoencephalopathies – diagnosis and therapeutic difficulties

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Leukoencephalopathy is a disease of the cerebral white matter whose cause can be known or not. Depending on the etiology, leukoencephalopathies may be genetic, inflammatory – noninfectious, inflammatory – infectious, toxic-metabolic, hypoxic-ischemic, traumatic or neoplastic.

We present the cases of 2 patients admitted to Constanta Neurology Department during 2018-2019, both with diagnosis of undetermined etiology leukoencephalopathy.

The first patient present fever, tetraparesis with distal amyotrophis in all limbs, fasciculations and confusional state, and cerebral MRI revealed a symmetrical supratentorial bilateral diffuse white matter affection. Infectious pathology was excluded, Ab anti-NMDA, antineuronal Ab both being negative. Since the imaging changes were symmetrical, and the patient presented amyotrophis, the suspicion of a late-onset leukodystrophy was raised, which is why Arylsulfatase A was obtain. She followed treatment with metilprednisolon, with initially favorable progression, but subsequently worsening and death.

The second patient was hospitalized in a confusional state, marked psycho-motor agitation and motor left deficit with a transient repeating of about 2 hours, a symptom emerging 4 days after the installation of two coronary stents. Cerebral MRI showed impaired white matter periventricular and bilateral fronto-parietal. Infectious pathology was excluded, Ab anti-NMDA, antineuronal Ab, both being negative. Metilprednisolone treatment was also initiated in this case with favorable response, followed by corticotherapy and outpatient therapy. Because the symptoms became worse at 4 days after stent, an allergic reaction to metal was also sus-

pected. Allergology tests were negative, but it should be noted that the result is not conclusive because the patient is in the trial under treatment with methylprednisolone, which he refuses to discontinue.

Both cases have posed difficulties in terms of etiological correlations and therapeutic modalities, indicating that leukoencephalopathy is a heterogeneous group of disorders, sometimes requiring a multidisciplinary approach.

Main determinants of quality of life in multiple sclerosis patients

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Quality of life (QOL) is defined as how an individual perceives their life in relation to their standards, goals, or expectations. Patients with multiple sclerosis report significanlty lowe QoL compared with general population.

This study aims to identify the determinants of QoL in patients with multiple sclerosis (MS).

The study included 150 patients diagnosed with relapsing remitting MS and secondary progressive MS in evidence of Neurology I Clinic Tg. Mures and a control group of 100 persons without MS.

From all participants of this study, demographic data were collected: age and gender, marital status, presence of children, level of education, occupational status, income, and disease related information: MS type, number of recurrences, disease duration, duration of treatment, type of treatment.

All patients completed the SF-36 questionnaires for life quality assessment, MFIS for fatigue assessment, BDI-II for assessment of the presence and degree of depression. Cognitive testing was also performed using SDMT.

Patients with MS have a significantly lower QoL compared to the control group.

SF-36 scores correlate statistically significantly with the level of education, the incomes, the number of recurrences, the degree of disability assessed by the EDSS score, the duration of the illness, the presence and severity of fatigue, depression and cognitive impairment.

Along with periodic clinical and imaging evaluation of treatment response in MS patients, QoL assessment and the factors that determine its decline should also be routinely done in all patients, because some of this factors, like depression, are treatable, with a great impact on QoL.

Low exposure to ultraviolet radiations – risk factor in multiple sclerosis

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Introduction. Among the external risk factors involved in determining multiple sclerosis, vitamin D deficiency and the low maternal exposure to ultraviolet radiation during pregnancy can be correlated with multiple sclerosis risk, so people born at the end of spring would be at greater risk of developing the disease.

Objective. The present study aims to explore the association between maternal exposure to UV radiation during pregnancy and the age of disease onset, as well as the clinical onset of relapsing remitting and secondary progressive multiple sclerosis – focal or multifocal.

Methods. For 204 patients, we obtained the date of birth, the age and the way of disease onset, and we achieved statistical correlations.

Results. The group examined included 204 patients, 134 female patients (66.3%) and 68 male patients (33.7%), with an average age of 40 years. The analysis of all data confirmed a significant risk of illness for those born in spring (March - April) – 20.8% and low risk of illness for those born in late autumn and early winter (November - December) – 9.4%.

Conclusions. The birth month is an important risk factor for multiple sclerosis, which is closely related to maternal exposure to UV radiation during pregnancy (I trimester) and implicitly to vitamin D.

Difficulties in immunomodulatory treatment in a case with relapsing-remitting multiple sclerosis

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Introduction. Pregnancy greatly reduces the risk of developing relapses in multiple sclerosis starting with the second trimester of pregnancy. There are difficulties in using immunomodulatory treatment during pregnancy and corticotherapy during the first trimester of pregnancy.

Objective. We present the case of a female patient with a history of multiple sclerosis, with a first relapse during pregnancy and the therapeutic strategies used.

Patient and methods. 31-year-old female patient with relapsing remitting multiple sclerosis, with onset of the disease in 2015 with spinal relapse, who received different immunomodulatory therapies (INF beta 1b and Glatiramer acetate) under which she developed major skin reactions, followed by oral immunomodulatory therapy (Teriflunomide) below which the evolution was favorable, discontinued in June 2017 by wash-out with Colestiramine to get pregnancy.

During the 7th week of pregnancy she presents spinal relapse with left brachial sensory-motor deficit.

The episode is interpreted as the expression of a new relapse of the chronic neurological disease and it is decided to initiate intravenous immunoglobulin treatment for five days. Clinical evolution is favorable with improvement in motor and sensory symptoms.

Conclusions. In multiple sclerosis, the use of intravenous immunoglobulin therapy is a treatment option in pregnancy. There are controversies in using corticosteroids during the first trimester of pregnancy when organogenesis occurs, exposure to these being associated with teratogenic effects.

Longitudinal extensive cervico-thoracic myelitis from NMO spectrum disorders associated with chronic HCV infection – a case report

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Introduction. Longitudinal extensive transverse myelitis is an immune mediated inflammatory disease of the spinal cord that extends over three vertebral segments on the MRI. It is found in optic neuromyelitis (NMO) / NMO spectrum disorders, in systemic immune disorders, metabolic and toxic deficiencies, infections, neoplasms. Hepatitis C virus often presents with severe extrahepatic complications including vasculitic neuropathy with cryoglobulins, ischemic and haemorrhagic stroke, acute disseminated encephalomyelitis and rarely myelitis.

Objective. We present the case of a patient with recurrent transverse myelitis who has chronic hepatitis C virus infection.

Case presentation. 66-year-old female patient hypertensive and dyslipidemic, known with chronic hepatitis C and type 2 diabetes who has recurrent episodes of longitudinal extensive transverse myelitis initially at the thoracic and later at the cervical-thoracic level. Repeated evaluation of the myelitis does not reveal a possible infectious or postinfectious cause, a paraneoplastic etiology -normal tumor markers and normal computed tomography of the thorax, abdomen and pelvis with contrast and negative immunological tests. Visually evoked potentials were in normal range and cerebral magnetic resonance imaging did not reveal additional lesions specific to optic neuromyelitis. A possible immune mechanism has been discussed regarding the chronic hepatitis C virus infection.

Conclusions. Transverse myelitis is a rare complication reported in chronic hepatitis C virus infection. The mechanisms involved are considered to be those immune mediated or direct invasion of the hepatic C virus in the central nervous system.

Depression and anxiety in multiple sclerosis and COPD patients

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Introduction. Depression and anxiety have a growing prevalence throughout patients with chronic diseases, often being underdiagnosed and/or incorrectly treated. We set out to study the impact of these psychiatric conditions in patients with multiple sclerosis and chronic obstructive pulmonary disease.

Material & methods. Following an analytical transversal observational study on a group composed of 64 patients (34 with MS and 30 with COPD), who were subjected to the Hamilton Depression Rating Scale and Beck Anxiety Inventory, we evaluated depression and anxiety. The following variables were followed: age, sex, marital status, occupation, psychiatric treatment for both the MS and the COPD patients, type of disease, treatment and EDSS for the MS patients and pack per year for the COPD patients.

Results and conclusions. There are several factors which predispose the patient to depression and anxiety, represented by a higher score for both scales – advanced age, single marital status, advanced degree of disability and type of treatment (for the MS patients) , advanced stages of the disease and a greater pack per year index for the COPD patients. We also found high scores on

both scales in patients who already had an antidepressant/ anxiolytic treatment and in patients who were working.

The tendency towards one or both of the psychiatric comorbidities appears both in patients with MS and COPD, with specific **variables** which are associated with a higher risk. Depression and anxiety are worth being noted taking into consideration the possibility of correctable risk factors and the possibility of treatment.

Long-term treatment with natalizumab in patients with multiple sclerosis – keeping the balance between risks and benefits

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Introduction. Progressive multifocal leukoencephalopathy (PML), an opportunistic infection caused by the John Cunningham virus (JCV), is a life-threatening complication in multiple sclerosis (MS) patients treated with natalizumab.

Methods. We performed a cross-sectional study on 46 MS patients treated with natalizumab; we estimated the individual risk of PML taking into consideration the three main known risk factors: treatment duration, previous immunosuppressive therapy and anti-JCV antibody index.

Results. Mean age was 35 ± 9.6 years and 54.3% were females. No patient received immunosuppressants prior to natalizumab. Median treatment duration was 37 months (50% IQR 13 – 68 months) with the following distribution: less than 24 months 32.6%, 24 – 48 months 23.9%, 48 – 72 months 21.7%, more than 72 months 21.8%. Anti-JCV antibody index was </=0.9 for 52.2% of patients, 0.9 – 1.5 for 4.3% of patients and > 1.5 for 43.5% of patients. Median risk of PML in our cohort was 0.6 ‰, 71.8% having an estimated risk of PML < 1 ‰ and 10.9% > 10‰. In the group of patients treated with natalizumab for more than 48 months 60% had a risk of PML < 1‰ and 25% a risk > 10‰.

Conclusion. Continuous MRI monitoring for early detection of PML in MS patients treated with natalizumab could be adjusted for each patient, and calculating the individual risk may allow administration of this therapy for longer periods of time without major safety concerns for a selected category of patients, without increasing the costs by very frequent MRI examinations.

Early progressive multifocal encephalopathy in a patient treated with natalizumab – Case report

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We present the case of a 31 years old patient, A.S., diagnosed with multiple sclerosis in 2009 following a left hemiparesis. A treatment with Rebif was initiated in 2010 and ruled until 2016. Because it has several relapses, in 2016, the patient is switched to natalizumab. We note a positive serology for JC virus. In February 2018, 16 months after the start of natalizumab treatment, the patient exhibited a worsening of the neurologic picture, particularly a walking degradation and a right homonymous hemianopia.

A cerebral MRI highlights a suggestive image of progressive multifocal leukoencephalopathy. PCR for JC virus is positive in the CSF thus confirming the diagnosis. The subsequent progression is slowly favourable after 5 sessions of plasmapheresis; to note an improvement in walking even though the patient does not regain the initial state. Visual field deficiency persists.

The particularity of the case consists in the early appearance of progressive multifocal leukoencephalitis in a patient with less than two years of natalizumab treatment. Although the current stratification of the risk of this complication suggests that administration of this treatment in patients with JC positive is certain in the first two years, we note that the risk, although small, is not null. Initiation of natalizumab treatment in patients with positive JC serology should be avoided.

VARIA

Spinal dural arteriovenous fistula – outcome after treatment

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Spinal dural arteriovenous fistula, although a rare condition, is the most common spinal vascular malformation. It presents as an ascending progressive mielopathy, with non-specific symptoms, leading to frequent misdiagnoses and delay in identification and treatment. The therapeutic options are embolization and surgical intervention, without significant differences regarding clinical outcome.

We describe the case of a 53-years-old man, presenting lower-extremities weakness and urinary retention, with acute onset. In addition, he complaints about lower back pain radiating in both legs, ascending paresthesia, constipation and hesitancy in micturition, symptoms starting 1 year ago – ALD score = 6 points (gait = 3, micturition = 3). The MRA of the dorso-lumbar spine showed changes highly suggestive for spinal dural arteriovenous fistula. Selective spinal angiography found a sacral fistula and embolisation was performed, with complete occlusion. Post-treatment, the outcome was favorable, with rapid improvement of motor function, but with complete urinary retention, that needed further catheterisation – ALD score = 4 points (gait = 1, micturition = 3). At the 6 months follow-up, the neurological status is improved, with persistent sensory disturbances and occasional urinary difficulties, without the initial radiological findings – ALD score = 2 points (gait = 1, micturition = 1).

The treatment halted the progression of the disease and improvement is seen in the majority of patients. Motor symptoms are associated with best improvement, while sensitivity and sphincter disturbances show less improvement. Because the prognosis depends mostly on the severity of symptoms pretreatment, it is important to consider this pathology, for early diagnosis and specific therapy. This case is particular due to onset symptoms and localisation of the fistula.

Immunosupressive therapy after heart transplant – proatherogenic effect?

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Atherosclerosis represents a frequent complication after orthotopic cardiac transplantation, in which hyperlipidemia, hyperinsulinemia, oxidative stress, endothelial dysfunction, fibroproliferative process and inflamatory cells activation lead to plaque formation and to further vascular complication. Among cerebrovascular complications, the most common is ischemic stroke. After cardiac transplantation, the etiologic factors of ischemic stroke are found in different percentages than in general population: atrial fibrilation, hyperhomocysteinemia, immunosuppressive therapy and cryptogenic causes (40%).

We herein report a case of a 61-years-old man, diabetic, with orthotopic heart transplantation made 9 years ago, currently under immunosuppressive therapy with Tacrolimus and Mycophenolate mofetil, who presented with motor deficit and sensory loss on the left hemi-body. Head and neck angio-CT showed occlusion of the right internal carotid artery and intracerebral atheromatosis. Laboratory findings revealed dyslipidemia, hyperhomocysteinemia. The patient had a favorable outcome under anticoagulant, antiaggregant and statine therapy, but he wasn't suitable for revascularization treatment.

Currently used conventional immunosuppressive therapy affects the physiopathological process of atherosclerosis, but the mechanisms are not fully understood. Hyperlipidemia occurs in 60 to 83% of heart transplant recipients treated with modern immunosuppressive therapy. There is an important correlation between corticotherapy and calcineurin inhibitors (Tacrolimus) and hyperlipidemia. Tacrolimus also modifies insulin-resistance, subsequently developing diabetes mellitus. Mycophenolat mofetil inhibits proliferation of smooth muscle cells, decreases inflamatory cells recruitment, inhibits nitric oxide formation and has a pro-apoptotic effect on T-cells, reducing plaque developpment. The effect of immunosuppressive therapy on atherogenesis is still unclear and needs further studies *in vitro* and *in vivo*.

Medullary infarction – case presentation

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Spinal cord infarction represents 1.2% of total ischemic vascular events of the nervous system. The etiologic factors are different from those of stroke and it usually involves lesions of the extravertebral arteries or of the aorta. Medullary ischemia often occurs in the anterior spinal artery territory and is frequently localised in the dorsal spine.

We herein present the case of a man of 69-years-old, hypertensive, diabetic, who presents with an acute onset of weakness involving all four limbs, at rest, without fever, trauma or pain, with high blood pressure values. The neurological examination reveals flaccid tetraparesis, predominantly with proximal deficit of the upper extremities and impairement of pain and temperature sensation with level of sensibility localised at C3. MRI of the cervical spine demonstrated a hyperintense lesion on T2-weighted images, localised at the C3-C5 level, in the anterior half of the cord, with restricted diffusion and without enhancement. Based on clinical and radiological findings, we established the diagnosis of spinal cord infarction at the cervical level and the patient received antiplatelet and statin therapy. The clinical outcome was unchanged, without improvement of the neurologic condition and the patient became dependent on another person.

Given the fact that it is an acute ischemic vascular lesion, thrombolytic therapy is a viable option, but difficult to realise in clinical practice, the only treatment available remaining antiaggregation therapy. The recovery is unsuccessful, with persistent disability. The atypical features of this case are the localisation, the onset and the lack of identifiable etiologic factors.

Three cases of Pompe disease – a rare genetic myopathy

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Introduction. Pompe disease is a rare autosomal recessive lysosomal disease produced by genetic variants that lead to the deficiency of alpha-glucosidase (GAA). Adult form (late-onset disease) manifests with skeletal and smooth muscle involvement, gait disturbances and respiratory failure.

Methods. We present 3 patients diagnosed with Pompe disease and followed in the Division of Medical Genetics of the University of Versailles, Paris, France.

Results. 2 males and one female, mean age of patients 61 years. Proximal muscle weakness was the main clinical sign in all patients. Two thirds of patients started to have difficulties during sport classes in childhood and adolescence. Later they developed difficulties in climbing stairs and actually the patients use walking sticks and deambulators. Non invasive ventilation during the night is required in all patients due to respiratory impairment. Vesical incontinence is managed only with medication. All patients have elevated CPK, transaminases and LDH. Diagnosis was confirmed by the dosing of GAA and genetic mutations in all patients. One patient had a muscular biopsy showing glycogen vacuoles in the muscle cells. All patients are treated with enzyme replacement therapy with alglucosidase for a mean duration of 9.6 years. Symptoms are stable for the last years. Research is ongoing to develop new enzymes for the substitutive treatment of Pompe disease. Gene therapy may represent a new hope for these patients.

Conclusion. Early diagnosis of Pompe disease is important in the differential diagnosis of limb girdle muscular dystrophies (LGMD), as patients may benefit from specific therapy.

An atypical case of pyomiositis following a relapse in a multiple sclerosis patient – case report

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Pyomyositis, an acute infection of the skeletal muscle, is usually secondary to *Staphylococcus aureus* hematogenous dissemination in more than 90% of the cases described in the tropical areas and in more than 75% of the cases in temperate areas in which the incidence is

increased secondary to immunosuppressive agents, used to treat various autoimmune conditions.

We present the case of a 39 years old male diagnosed with recurrent remissive multiple sclerosis (MS) in 2016, with no history of trauma or infectious diseases, treated with Interferon beta-1a for the past 7 months.

He presented in our clinic complaining of distal limb paresthesias and decreased muscle strength in the inferior limbs. The onset was 3 days prior to presentation. He had no fever, no enlarged lymph nodes, no muscle tenderness. The neurological exam reveals mild paraparesis, grade 4+/5 MRC, brisk deep tendon reflexes, bilateral Babinski sign and hypoesthesia of the lower limbs and distal paresthesias. A relapse was suspected, and the patient was started on intravenous methylprednisolone,with a favourable evolution. One day after discharge, he spiked a high-grade fever with generalised muscle aches, more expressed in the thighs and joint pain, inability to walk.

The initial laboratory results revealed marked WBC count, elevated liver enzymes, normal LDH, elevated inflammatory markers. Thoracic X-ray and urine analysis were negative. Viral hepatitis antibodies, HIV and syphilis serology were also negative.

Empirical treatment with Ceftriaxone was initiated, and the next day, a mild tumefaction of the lower limb and the ultrasound investigation confirmed the diagnosis of deep vein thrombosis and subcutaneous LMWH therapy was established.

After 2 days, he develops a generalised cutaneous staphylococcal folliculitis with the suspicion of pyomyositis. Consecutive blood cultures in febrile spikes were negative. A soft tissue ultrasound revealed areas of muscular necrosis and oedema in the endomysium with Doppler signal. MRI of the extremities revealed diffuse prefascial and interfascial T2/FLAIR hypersignal, with central necrosis. After confirmation, treatment was changed to Meropenem and Vancomycin, with a favourable outcome. After 6 days of antibiotics, a follow up soft tissue ultrasound showed no signs of necrosis.

Wake-up stroke at a 24 years old patient treated successful with thrombectomy according to DAWN criteria

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Wake-up stroke represents a certain disadvantaged subgroup and treatment in the acute phase can be a challenge, as the onset of the event is unknown. Thrombectomy performed after 6 hours since the onset does not represent a guide recommendation, but can be performed in selected cases.

We present the case of a 24 years old patient, without any vascular risk factors or personal pathological history, is found in the morning with motor deficit on the right side and speech and comprehension impairment. Neurological exam shows right sided hemiplegia, right sided facial palsy, severe aphasia, NIHSS 16 points.

CT scan shows a mild loss in periinsular differentiation of white and gray matter and hyperdense middle cerebral artery (MCA) on the left side. CT cerebral angiography shows a filling defect in the left internal carotid artery that extends to MCA (complete thrombosis) and left anterior cerebral artery. Paraclinical show a moderate anemia. Blood pressure and ECG were in normal range.

Cerebral MRI is performed showing in the DWI sequence a hypointensity lesion signal in the MCA territory.

We decided to do thrombectomy, being eligible according to DAWN criteria, TICI 3 reperfusion being obtained. The patient's evolution was favorable, with quasi-total neurological recovery.

Primary hypercoagulability panel, HIV, VDRL, autoimmune assay where within normal range except for mild hyperhomocysteinemia and cryoglobulines with were positive. Transthoracic cardiac ultrasonography raised the suspicion of patent foramen ovale, but transesophageal cardiac ultrasonography dismissed this.

Conclusions. The effect of thrombectomy performed after the 6-hour window is still unsure, but in the case of wake-up stroke it's the only option if the onset of the symptoms is unclear. In the case of a young patient in which we perform thrombectomy, even in the 6-24 hours window, the outcome is better than standard treatment if there is a mismatch between clinical deficit and imaging.

Acute intermittent porphyria – frequently misdiagnosed and mistreated

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Introduction. Porphyries are rare metabolic disorders, caused by altered activities of the enzymes involved in heme biosynthesis, resulting in neurovisceral (axonal peripheral neuropathy, abdominal pain), as well as neuropsychiatric and cutaneous manifestations.

Materials and methods. A 37 years old woman, with a history of recurrent abdominal pain, was admitted for a new episode of severe cholicative abdominal pain, associated with the absence of the intestinal transit. She also presented marked leukocytosis and the plain abdominal X-ray revealed hydro-aeric levels, therefore she was diagnosed with acute surgical abdomen and underwent laparoscopic exploratory surgery with general anesthesia, followed by dysphonia and tetraparesis, which gradually worsened to tetraplegia, and so she was transferred in the Neurology Department of the Colentina Clinical Hospital. The neurological examination revealed flaccid tetraplegia, plantar hyperesthesia, deep tendon reflexes globally abolished, severe dysphonia and visual hallucinations. The general workup revealed hyperchromic urine, neutrophilic leukocytosis, hyponatremia, cholestasis syndrome, mild hepatic cytolysis, urinary bilirubin and urobilinogen levels slightly elevated. Further investigations revealed an increase in delta aminolevulinic acid and urinary porphyrin levels (5-6xUPN), therefore establishing the diagnosis of acute intermittent porphyria and starting treatment with human hemin (Normosang), with a mild improvement of symptoms and the prognosis.

Results and conclusions. Acute intermittent porphyria (AIP) is often misdiagnosed and mistreated. Although rare, it must always be taken into account in the differential diagnosis of severe abdominal pain, considering that some therapeutic gestures may exacerbate a porphyrinic crisis and can endanger the patient's life. Knowing the AIP precipitating factors a crisis can be prevented.

Spontaneous multiple cervical artery dissection: Case report

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The spontaneous dissection of the cervical arteries (SCAD) is an important cause of ischaemic stroke in young adult. Multiple SCAD is an uncommon condition, occurs only in 13-16% of the cases.

A 38 years old female patient with primary hipercoagulability and autoimmune thyroiditis presented after an upper respiratory infection with severe cough, bilateral cervical pain, transient visual symptoms (scintillations, flashing lights) and a short lasting episode of right sided hemiparesis. The neurological examination at admission was unremarkable. The duplex ultrasound examination of the cervical arteries revealed bilateral significant irregular internal carotid artery (ICA) stenosis secondary to multiple mural hematomas and the presence of mural hematoma at the V2 segment of the left vertebral artery (VA), without significant stenosis. The cervical and cerebral MRI examination confirmed the multiple dissections in both ICAs and left VA. The laboratory examinations revealed besides the primary hypercoagulability state (*factor V H1299R, MTHFR A1298C,* factor *XIII V34* L, *PAI-1 4G/5G, hyperhomocysteinemia*) elevated anti-thyroid peroxidase antibody level. Anticoagulation teraphy with enoxaparine was initiated. The cervical pain significantly decreased and no transient neurological symptomes occured after the initiation of the anticoagulant treatment. The follow up duplex examinations revealed the progressive regression of the intramural hematomas.

According to literature date the multiple CAD have favorable outcome and is considered a transient arteriopathy with good long-term prognosis. The role of primary *hypercoagulable* states in CAD is not clear, but there are some publications in the literature that links the thyroid autoimmunity with this pathology.

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Acute onset paraparesis – Guillain-Barré like syndrome as a neurological complication of hepatic cirrhosis – a case report

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The case describes a 64-year-old Caucasian male diagnosed with neurological manifestations linked to a background of hepatic cirrhosis. Upon hospital admittance, the patient described a rapid and progressive onset of tetraparesis, with upper limb paraesthesia and lower limb weakness. This was preceded by thoracolumbar pain with T10 sensory level loss. Given these signs, a spinal injury was suspected, though later MRI findings disproved this initial supposition. Lumbar puncture revealed albuminocytologic dissociation, while a nerve conduction velocity test showed severe symmetric sensorimotor polyneuropathy, which is suggestive of polyradiculoneuritis.

Following a more ample examination and anamnesis, the patient's severe hepatic dysfunction was ruled as the etiological background for the polyradiculoneuritis, given its listing as a possible complication of cirrhosis. Corticoid therapy was attempted, yet it was interrupted; esophageal varices were found during an upper GI endoscopy, which was initially meant to ascertain the presence of a GI tumor due to high CA 19-9 levels. Plasmapheresis was considered, yet the patient was not eligible, with hypoalbuminemia and thrombocytopenia being the relevant exclusion criteria. Patient was then given supportive and gastroenterological treatment, before being released from hospital care.

A myriad of psychiatric symptoms with an etiology hidden in auto-immunity – Limbic encephalitis with positive voltage-gated potassium channel antibodies

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A relatively rare auto-immune disorder in modern clinical practice, limbic encephalitis (LE) is characterized by a monophasic presentation, notably encompassing a subacute cognitive deterioration, drug-resistant seizures and limbic system involvement.

We present a 71 year-old-woman with a history of depression which presents a relatively subacute onset over 1 month with confusion, postural instability and behavioral changes, being initially admitted in the psychiatric ward. Under treatment with antipsychotic agents, the parkinsonian syndrome worsened together with the cognitive deterioration, associating partial motor seizures, thus being transferred in our clinic.

Upon admission, she presented with marked spatial-temporal disorientation and cognitive impairment, essentially bed-ridden with walking apraxia, axial and limb rigidity, bradykinetic. She presented numerous partial motor seizures and facial-brachial dystonic movements. Her work-up showed marked hyponatremia with an increased urinary excretion of sodium. The brain-MRI revealed bilateral T2 hypersignal in the medial aspect of the temporal lobes, hypothalamus adjacent. The voltage-gated-potassium-channel antibodies (VGKC) were positive. A paraneoplastic screening including onconeural antigens and whole-body-CT scan was negative.

Having confirmed the auto-immune nature, the patient was started on intravenous immunoglobulin, antiepileptic agents, sodium supplementation and the antipsychotic medication was removed.

The evolution was slowly favorable, being discharged with ambulatory independence on short distances, a significant reduction in the extrapyramidal symptoms, cognitive and short-term memory improvement and reduced intensity and frequency of facial-brachial seizures.

We should suspect an underlying cause of autoimmune nature in a patient with a subacute onset of behavioral changes, dementia and seizures, for LE is a potentially treatable immunological condition when diagnosis is appropriate.

Optic neuropathy due to *Treponema pallidum* infection – a serious, but treatable condition

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Introduction. Neurosyphilis has a variety of clinical manifestations and optic neuropathy may have serious consequences, affecting the patient's quality of life.

Methods. We present the case of MMV, a 43-year-old woman, hypertensive, with a history of bilateral optic neuropathy installed successively (2008-2016), for which she had multiple ophthalmological evaluations, without establishing the etiology of the ocular manifestations. The neurological examination reveals a decrease in visual acuity in both eyes (LE > RE), a narrow field of vision in the left eye, normal convergence reflex, equal pupils, nonreactive to light, brisk osteotendinous reflexes in the right upper limb and left lower limb, with no other deficits. The patient was investigated by orbital CT scan, brain MRI, visual evoked potentials, laboratory examinations and lumbar puncture with CSF analysis.

Results. Brain MRI excluded a demyelinating disease in a young woman and the evoked visual potentials showed wider complexes and P100 increased latency. Laboratory examinations reveal hypothyroidism and serum TPHA ++++, and in the CSF TPHA 1/4 +/-. When the anamnesis was repeated, the patient recognizes that she was diagnosed with syphilis at 20 years of age, followed by treatment with penicillin with unspecified doses and duration. The patient was treated with penicillin G, with clinical review and CSF analysis at 6 and 12 months.

Conclusions. Visual prognosis is poor, especially if the damage is bilateral, but if optic neuropathy is diagnosed early, sight can be saved. Therefore, neurosyphilis should be considered despite its decreasing frequency.

Takotsubo syndrome – a multidisciplinary perspective: Case report

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Introduction. The 1840s neurocardiac axis concept has been greatly reinforced by recent research concerning structural and functional changes present in the brain of Takotsubo cardiomyopathy patients. A particular stress cardiomyopathy epidemiological group are postpartum women.

Methods. A 29-year-old female, 4 months postpartum, with no medical history, presented to our clinic with nausea, vertigo, dysarthria, dysphonia, gait ataxia of 1.5 hours onset and a 3-week-old right-sided cervical pain.

The neurological examination revealed: left central facial palsy, right facial hypoesthesia, vertical and horizontal gaze nystagmus, right sided tongue deviation, dysphagia, right sided hemiparesis, left limbs hypoesthesia, lower limbs ataxia.

The cerebral computed tomography scan was normal.

Results. It was decided to proceed with intravenous thrombolysis using recombinant tissue plasminogen activator.

Digital subtraction angiography of the cervical and cerebral arteries showed the presence of bilateral vertebral artery (VA) dissection.

As the patient exhibited acute respiratory failure she was transferred to the Intensive Care Unit for further management. In addition, a cardiological exam was performed and it revealed, by means of echocardiography, the presence of stress cardiomyopathy.

The head and neck magnetic resonance imaging emphasized T1/T2-weighted hypersignal of the wall of the right VA (V3-V4 segments), similar alterations of the left VA and restricted diffusion in the right hemimedulla.

Four weeks later, the patient was discharged with mild dysphagia and dysarthria, left-sided hypoesthesia and mild right-sided hemiparesis.

Conclusions. This case report presents a patient's postpartum neurocardiovascular complications in order to emphasize the recently updated hypothesis of a neurocardiac pathological mechanism in Takotsubo syndrome.

Neurological manifestations in Takayasu arteritis – case report

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Introduction. Takayasu arteritis (TA) is a rare chronic inflammatory vasculitis of unknown etiology that affects aorta and its primary branches. Women being affected in 80 to 90 percent of cases with a usual onset age between 10 to 40 years and a higher prevalence among Asians associated with HLA-Bw52 and HLA-B39.2. Systemic symptoms in the early phase of Takayasu arteritis include fatigue, weight loss, and low-grade fever. Clinical manifestations depend on the affected vessel.

Aim. The purpose of this case report is to describe neurological manifestations of Takayasu arteritis.

Methods. Case report of a 51-year-old patient previously diagnosed with Takayasu arteritis and multiple stenosis (renal, left common iliac and external, celiac artery), has been admitted to the Neurology Section with expressive aphasia speech disorder, agraphia and alexia, symptoms duration ~ 15 minutes.

Results. Obstruction of bilateral subclavian arteries, right vertebral artery and common carotid artery threatlike path. Coarctation of the aorta.

Conclusion. During disease development the neurological manifestations are encountered in 10 to 20% of cases, the most common being the headache, postural dizziness followed by TIA, stroke, hypertensive encephalopathy, seizures.

„Belly dancer" dyskinesia in a case of pontine osmotic demyelinaton

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The spectrum of neurological manifestations in pontine osmotic demyelination syndrome is polymorphous including motor deficit, ataxia, confusion and movement disorders, of which abdominal muscle dyskinesia is an extremely rare phenomenon.

We report the case of a 55 year old patient, with ethanol addiction, associated hepatopathy and untreated right body focal motor seizures, without loss of awareness.

She was referred to our clinic for progressive gait and coordination disturbance, confusion and increased seizure activity, developing over three weeks. In this interval there were documented oscillations of serum sodium levels.

Clinical exam showed bipiramidal syndrome, tetraappendicular ataxia, confusion and focal motor seizures – the electroencephalography showing delta and theta bursts on left hemispheric and central derivations.

Notably she had continuous, involuntary movements, with a rhythmic and undulating pattern of the abdominal wall muscles, absent during sleep, highly suggestive of „belly dancer" dyskinesias; these persisted after obtaining the focal seizures control and remitted using Clonazepam.

Cerebral magnetic resonance imaging revealed a single, trident-shaped hyperintense FLAIR and T2 centropontine lesion, without enhancement, with a possible metabolic or inflammatory substrate. Analysis of cerebrospinal fluid (increased protein level, normal celularity and negative cultures), screening for causes of autoimmunity (antiganglioside antibodies), paraneoplastic syndrome (onconeuronal antibodies) and infection were negative.

We concluded on a metabolic origin of the lesion through osmotic demyelination of the pons, it's clinical manifestation having a distinctive feature – the belly dancer dyskinesia.

Patent foramen ovale – a cause of ischemic stroke in young adults that should not be overlooked

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Backround. Until recently, for up to 40% of young patients with acute ischemic stroke (AIS) no etiology could be determined, despite extensive investigations. These cases were categorized as cryptogenic strokes. By means of modern imaging techniques, a significant proportion of such cases were attributed to paradoxical embolism due to the presence of patent foramen ovale (PFO).

Case presentation. A 38-year-old male, heavy smoker, with medical history of AIS of unknown etiology, hypertension, dyslipidemia, was admitted to our clinic for right upper limb weakness and language impairment. The neurology examination revealed only mild right brachial paresis. Cerebral magnetic resonance imaging of the head and neck showed multiple small acute ischemic lesions in the middle cerebral artery territory and ruled out the presence of artery dissection that was suspected when ultrasonography of the cervical and cerebral arteries was performed. Micro-bubbles Transcranial Doppler Monitoring revealed more than 300 microemboli after performing the Valsalva maneuver indicating the presence of an arterio-venous shunt confirmed by the transesophageal echocardiography which showed the presence of a PFO. Potential sources of venous embolism were excluded. The patient received treatment with oral anticoagulants and it was proposed for endovascular closure of the PFO.

Conclusion. This case highlights that PFO represents an etiology that should not be overlooked in young pa-

tients with AIS. Micro-bubbles Transcranial Doppler monitoring is a fast, non-invasive, highly sensitive and specific method for identification and quantification of a circulatory shunt thus permitting the establishment of a definite etiological diagnosis.

Inferior thoracic myelitis – diagnostic challenge in cutaneous eruption context – case report

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Authors present the case of a 80-year-old female patient with history of type 2 diabetes mellitus, which was well-balanced with diet, without any chronic medications at home, who suddenly develops supra-acute flaccid paraplegic deficit, which was preceded by dysesthesia in inferior lumbar and sacral territory, and followed by bowel and bladder dysfunction, the symptoms noticed in about 1 hour.

There are presented the clinical and anamnestic information, also the paraclinical laboratory and imagistic investigations, which confirm the inferior thoracic spinal etiology of the paraplegic deficit which has suddenly developed.

The diagnostic steps to establish the cause of the myelitic process are guiding towards a possible parasitic etiology, presenting further arguments pro and against such a nosological assignment. In the end, the situation of this case shall be analyzed in relation to other similar case reports from the medical literature.

Keywords: inferior thoracic myelitis, paraplegia, cutaneous eruption

Intravascular lymphomatosis presenting as skin lesions and subacute encephalopathy

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Intravascular lymphomatosis is a neoplastic multisystemic disease; it is a rare subtype of diffuse large cell lymphoma in the lumina of small vessels. A 49-year-old Caucasian women was admitted to the Department of Internal Medicine for fatigue, night sweats, loss of weight, and multiple nodules in the forearms. Three months ago her family noticed problems with her cognitive function, she displayed difficulties with common daily tasks. The neurological examination revealed bradypsychia. Laboratory data showed modestly high levels of LDH, and CRP. The day after admission, the patient had headache which raised in intensity; his mental status deteriorated, she was disoriented to time and place. She presented nucal rigidity. The cerebral CT examination showed multiple spontaneous hyperdense supratentorial subcortical lesions. The CSF examination revealed a hemorrhagic aspect, elements 30/mm³, cytology: lymphocytes 90%, numerous erythrocytes, proteinorachia 96 mg/dl, glycorrhachia 60 mg/dl. Intravenous methylprednisolone (0.5 g x 2/day) and mannitol 20% 1g/kgw/day were administered for five days without response. She became comatose and she died six days after hospitalization. The post-mortem macroscopically brain examination showed diffuse hemorrhagic areas in the supratentorial subcortical regions. Microscopically examination showed capillaries, venules, and many arterioles distended by large malignant cells suggesting malignant lymphocytes which were intraluminal. Every organ was involved, except bone marrow and lymph nodes. Immunohistochemical studies showed intensive staining for B cells and negative staining for factor VIII related antigen, a specific endothelial cell marker. Intravascular lymphomatosis was the post-mortem diagnostic. It represents a difficult diagnostic challenge which involves laboratory, imagistic and immunohistochemical investigations.

The thrombolysis procedure at the pacient receiving Dabigatran

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Introduction. Although in large vessel thrombosis, thrombolytic therapy with rtPA has no complete improvement, but at our patient therapy was a success, not followed by rethrombosing the vessel. Respecting the national and international guidelines in place, the patient was able to receive fibrinolytic therapy, with a specific antidote (Idarucizumab) on Dabigatran treatment.

Case presentation. 87-year-old patient known with high-grade AIF with high AV in treatment with Pradaxa

underdosed at home (110 mg/day) and Aspirin 500 mg/day (automated), left ventricular insufficiency, NYHA II, ischemic heart disease, atheromatosis generalized, prostate adenoma, pericarditis one month ago (left at the time of presentation), and left pleurisy diagnosed one month ago and still present in large quantities, is brought into the emergency service for altered general condition in the superficial coma GCS 8p. Symptomatology suddenly started with headache, dizziness and balance disorder, then the patient became sleepy. At the neurological examination the patient responded flexibly to repetitive nociceptive stimuli, did not open eyes, did not execute orders, did not present oculomotricity disorder, had equal, intermediate pupils, photomotor reflex and corneal reflex present bilaterally, spoke unintelligibly and present hemiplegia at the left limbs, fluctuating and hemiparesis at the right limbs 3/5 MRC, NIHSS 19 points. An angio CT cerebral is performed which reveals vertebral artery thrombosis in the V3, V4 and basilar artery in 1/3 proximal with retrograde filiform loading in 1/3 medium and distal. The patient was presented 60 minutes from the onset of the thrombolysis window. Patients treated with Pradaxa, even if they were sub-dosed, were given Idarucizumab (Praxbind 5 mg iv), and thrombolytic therapy with Actilyse was given at 15 minutes. Two hours after initiation of thrombolysis, the patient is NIHSS 0, conscious, without any neurological deficit. It was discharged 5 days after the Rankin 0 acute episode.

Conclusion. Thrombolytic therapy in patients with permanent atrial fibrillation in NOAC treatment is only feasible in patients treated with Dabigatran for which there is a specific antidote, ie Idarucizumab.

Keywords: vertebrobasilar stroke, basilar artery occlusion, trombolysis, Idarucizumab, Dabigatran

Simultaneous stroke and myocardial infarction: Which was first?

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Concomitant acute ischemic stroke and myocardial infarction is an uncommon medical emergency condition. Challenges for the physicians regarding the management of this situation are essential since early treatment of one condition will inevitably delay the other.

S.I., 74 years oldmale patient, known hypertensive in treatment, was admitted for sudden onset right hemiparesis and dysarthria installed 7 hours earlier, these symptoms being preceded by nausea and vomiting. Neurological exam revealed a right pyramidal syndrome with right hemiparesis and moderate dysarthria. Emergency cerebral CT scan was performed and revealed an acute ischemic stroke in the superficial segment of the middle cerebral artery. The electrocardiogram showed acute myocardial infarction. Given that the patient was not in the thrombolysis window, the high risk of hemorrhagic brain complications and the potential negative consequences on vital and functional outcome, we decided to administer antiplatelet medication (aspirin 300 mg) and statin in maximal dose. The evolution was favorable, with improvement of the motor deficit. Coronarography was performed and revealed unicoronarian lesion with coronary ventricular fistulae, so we decided a therapeutic intervention to be performed within the next two months.

Mechanical thrombectomy for acute stroke, a procedure that is not available in most hospitals including ours, could theoretically be combined with percutaneous coronary intervention, but we didn't find any single report of such combined intervention. Some authors believe that in the presence of acute ischemic emergent conditions affecting different territories or organs intravenous thrombolytic therapy is a reasonable option.

Cerebral venous thrombosis in a young patient with otic infection and venous angioma

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Background. Cerebral sinus thrombosis (CST) represents a complication of acute otitis, which can lead to severe neurological sequelae and death. Not long ago, cerebral venous angioma (VA) was considered having a low incidence, but with routine using of modern neuroimaging techniques, VA is perceived as being one of the most frequent cerebral vascular malformation. The aim of this paper is to describe the case of a patient with CST and concomitant otic infection and its rare relationship with cerebellar VA.

Methods. A 24-year-old female with medical history of otitis (one year ago) was admitted to our hospital for right otalgia, otorrhea, occipital headache, vertigo, nausea and vomiting. Neurologic examination revealed horizontal nystagmus with slow saccades to the right, laterodeviation to the right on Romberg's test.

Results. Contrast cerebral computed tomography revealed filling defect in the right sigmoid and transvers sinuses, but also multiple linear areas of enhancement in the right cerebellum. Magnetic resonance imaging confirmed the presence of thrombosis of the sinuses mentioned above, but also of superior and inferior petrosal sinuses and of a right cerebellar VA. The drainage vein of the VA was also thrombosed. The patient was treated with anticoagulants and antibiotics with a favourable outcome.

Conclusion. This case presentation highlights the fact that headache in patients with otic infections should raise the awareness regarding the presence of CST. There are only few reports in the literature regarding drainage vein thrombosis of the developmental venous anomaly, in our case this being associated with CST and precipitated by the presence of the infection.

Vertebral hydatidosis in an immunocompetent young patient

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Larval cysts of *Echinococcus granulosus* may develop in any organ. Approximately 80% of patients affected present with single-organ involvement and have a single cyst. The most common location (in about two-thirds of cases) is the liver, followed by the lung. Vertebral echinococcosis is rare, accounting for only 0.5-2% of cases.

Recently, in our clinic we have diagnosed a case of *Echinococcus granulosus* infection with multiple localizations (vertebral, paravertebral and hepatic) in an immunocompetent patient.

Keywords: *Echinococcus granulosus*, vertebral hydatidosis

Atypical case onset with cardio-respiratory arrest due to spontaneous external carotid artery and internal jugular vein rupture in a patient diagnosed with Recklinghausen neurofibromatosis and possible type IV Ehlers-Danlos syndrome

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Neurofibromatosis and Ehlers-Danlos (EDS) syndrome are a rare heterogeneous group of inheritable diseases that can be both autosomal dominant and recessive genetic syndrome. Asocciation of the two diseases is really rare but has been recognized in the literature.

For individuals affected by vascular-type EDS, who represent only 6% of EDS, the average age for arterial rupture is 23 years, most commonly involving an abdominal or splenic vessels.

Recently in our clinic we have diagnosed an atypical case of these two genetic disorders.

We present the case of atypical onset with cardio-respiratory arrest due to spontaneous external carotid artery and internal jugular vein rupture in a patient diagnosed with Recklinghausen neurofibromatosis and possible type IV Ehlers-Danlos syndrome.

Cerebellar medulloblastoma – Case presentation

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Medulloblastoma is the most frequent primitive neuroectodermal tumor. It represents 25% of child`s cerebral tumors. However one quarter of medulloblastomas appear after the age of 20 years. The tumoral body locates usually on the median line on the inferior part of cerebellar vermis and at the floor of the fourth ventricle. It is also known as primitive neuroectodermal tumor, a spinal dissemination appears in one third of the cases.

Signs and symptoms are secondary to the increase of intracranial pressure by the compression: intense head-

ache, vomiting, frequent falls, diplopia, sixth nerve palsy, strabismus, dizziness, rotatory vertigo, nistagmus.

PNET tumors are invasive, growing faster, frequent metastasis in different regions of the brain and in the spinal region. On the IRM point of view PNET tumors present hiperintense signal in T1 and T2 with heterogeneous structure and the invasion of the fourth ventricle.

We present the case of a 25 years old patient with no significant medical history till the debut of symptomatology, occurred in 2016 with headache, rotary vertigo, dizziness, malaise, blackout crise.

IRM cerebral examination and later cerebral biopsy issued the diagnosis of desmoplaplastic medulloblastoma on the 4-th grade. Neurosurgical intervention was performed in Germany in September 2016 and radioteraphy and chemotherapy was recommended, but not made. Tumoral recurrence occurred in 2018, when a second neurosurgery at the National Neurology Institute and Neurovascular Diseases was performed and radiotherapy afterwards targeting cerebral and spinal lesions. The evolution was favorable afterwards.

The patient was admitted in our clinic on the day of 29.01.2019 for dizziness, rotatory vertigo paresthesia on all 4 limbs, appendicular ataxia or inability.

IRM cerebral and spinal reveals local relapse and multiple leptomeningeal secondary lesions with medular affected site C6-C7 and T2-T3. It was recommended chemotherapy, intracranial hypertension treatment and radiotherapy consult.

He was discharged at his own request and redirected to the Oncology department for further chemotherapy treatment.

After 10 days from his discharge, death occurs suddenly.

In conclusion, cerebellar medulloblastoma needs targeted treatment performed in good time to prevent recurrences and to increase the survival period because the evolution is sometimes impredictible.

Stroke and bullous dermatoses… Coincidence?

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Introduction. Bullous dermatoses is an skin-specific autoimmune disease with systemic involvment, with molecular basis related to the development of IgG autoantibodies targeted against desmosome proteins. The prognosis of the bullous dermatoses is indicated not just by the complications of the relapses (superinfections with various microbial agents of denuded skin areas, associated fever, significant dyselectrolytemia, some of them life-threatening), but also by increasing the cardiovascular risk.

Purpose. The purpose of this report consists in marking the association between an acute cerebrovascular event and an active phase blistering dermatosis, at a pacient with no other known risk factors.

Case presentation. Female pacient, 46 years old, diagnosed with bullous dermatoses 1 year before, admitted to the emergency room with left upper and lower limb acute motor deficit, facial asymmetry. The neurological examination revealed a conscious, cooperative, right-handed pacient with left predominantly brachial flaccid hemiplegia, absent osteotendinous reflexes on the left side, left Babinski reflex present, left central facial nerve palsy. Native cranio-cerebral computed-tomography describes acute infarction in the right sylvian arterial territory. The general physical examination shows multiple fragile blisters with serocitrin content and well-defined painful skin erosion, localised primarily in the anterior and posterior thoracal regions.

Conclusion. A chronic proinflammatory background associated with a relapse increased inflammatory status is probably the main pathogenic mechanism responsable for the vascular events in pacients suffering from blistering dermatoses.

Progressive leukoencephalopathy in an elderly patient

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We present a case of a 75-year-old female with a history of hypertension, dyslipidemia, bilateral carotid atheromatosis and history (5 years prior) of cerebral white matter disease treated as stroke. The patient presented in emergency room with acute apraxia and confusional state, initially suggestive of acute cerebrovascular disease. Cerebral magnetic resonance imaging findings showed vasogenic edema in the frontal, parietal and occipital lobes bilaterally. A lumbar puncture with exten-

sive laboratory tests was performed. The patient was treated with appropriate medications which included antiepileptics drugs and corticosteroids with complete resolution of her symptoms. This case report discusses a case of chronic white matter disease and how correct diagnosis may prevent permanent neurological sequelae.

Acute basilar artery occlusion secondary to intracardiac thrombus successfully treated with thrombectomy in a 20 years-old male

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Epidemiological evidence suggests that the incidence of ischemic stroke in young adults has increased substantially. The etiology of stroke in young patients is different from that of the elderly, the main causes in young people being dissection of carotid or vertebral arteries, cardiac disease, drug use or oral contraceptives, and primary thrombophilia.

We present the case of a 20-year-old, smoker, with a recent history of angina pectoris, who woke up with motor deficit in the right limbs, nausea, vomiting, drowsiness. The CT scan describes a left thalamus hypodens area. Subsequently, the patient exhibits altered consciousness, being intubated and mechanically ventilated, the cerebral angio-CT revealing the occlusion of the distal basilar artery. It is decided to transfer the patient from UPU Sibiu to SCJU Tg. Mures in order to perform thrombectomy, where he arrives 12 hours after waking, in GCS 3 points under sedation. Femoral puncture is performed 13 hours after waking, and 13 hours and 40 minutes after awakening, the vertebro-basilar tree is completely recanalized.

Primary thrombophilia tests shown heterozygous mutation of VH1299R (R2) and PAI-1 4G / 5G, and at echocardiography akinesia of left ventricular apex and intraventricular thrombus. Repeated CT cranial examination and subsequent cerebral MRI revealed vascular lesions in the left thalamus and left cerebral peduncle.

Under antiplatelet, LMWH, statin and kinetotherapy, the evolution was favorable. At discharge, the patient had mild left facial palsy, torsional nystagmus at horizontal and upright gaze, right hemiparesis grade 4/5 MRC.

Cardioembolic cerebral infarction accounts for about one-third of stroke in young adults. Instead, the role of thrombophilia in determining arterial thrombosis is controversial. In the presented case, the association between smoking and the two mutations of Factors V and PAI-1 could be the cause of myocardial infarction and stroke. Although the interval for thrombectomy in basal artery thrombosis may be extended in selected cases up to 12 hours, the decision to perform the procedure in the present case was life saving, upon discharge the patient experiencing minimal neurological deficits, NIHSS 3 points.

Internal carotid artery occlusion – a therapeutic option for giant aneurysms

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Introduction. Giant aneurysms (GAs) have a poor prognosis due to their high risk of rupture and subarachnoid hemorrhage. Moreover, GAs can determine debilitating neurological symptoms due to compression of adjacent structures. Parent artery occlusion is a valuable therapeutic procedure for excluding GAs of internal carotid artery (ICA). It has major benefits: stasis and immediate thrombosis, improvement of symptoms generated by the mass effect and prevention of recanalization.

Methods. A 42-year-old female patient was admitted to our clinic for recanalisation of an unruptured GA of ICA, previously treated by stent assisted coiling.

One year prior to the diagnosis, the patient presented blurred vision and headache. Digital subtraction angiography was performed at that moment, which revealed an unruptured saccular GA (2/2/2 cm) in the ophthalmic segment of the right ICA, with a narrow neck. The PHASES score was 10, having a 5-year rupture risk of 5.3%. The patient was treated by placing 12 platinum coils in the aneurysm and one auto-expandable stent in the ophthalmic segment of the right ICA. One year later, recanalisation of the aneurysm occurred.

Results. We proceeded to therapeutic parent artery occlusion with coils, preceded by an angiographic occlu-

sion balloon test. No major complications were reported after the procedure.

Conclusions. This case highlights the importance of periodic monitoring of patients with GAs treated by using endovascular techniques. Due to high blood velocity and modified anatomy, GAs of ICA are prone to recanalization. In these cases, occlusion of the parent artery can be a safe and effective treatment for unruptured GAs.

Autonomic seizures of infectious etiology – A case report

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Introduction. The most common sporadic cause of encephalitis in adults and children above 6 months is *Herpes simplex* virus 1 (HSV-1) infection. Epileptic seizures are postinfectious complications occurring in 25% of cases, with percentages following memory disorders (69%) and behavioral disorders (45%).

Case presentation. We describe the case of a 50-year-old woman who, in December 2017, came in emergency for frontal-parietal headache, vomiting, parosmia, somnolence, followed by fever, chills, loss of consciousness and generalized tonic-clonic seizures. CSF analysis revealed anti-HSV-1 IgM positive antibodies, and cerebral contrast enhanced MR angiography (MRA) – hyperintense signals in T2 and FLAIR in the basal internal region of the left temporal lobe. After 3 weeks of antiviral treatment (Aciclovir i.v.), the evolution was slowly favorable.

At the end of February 2018, short episodes of "epigastric malaise", generalized piloerection and hypercrimation (dacrystic seizures), with a duration of seconds and frequency of 5-10 times/day, appeared. The EEG examination revealed left temporal epileptic discharges. After increasing the daily dose of CBZ the number of seizures reduced. Since August 2018, the patient has no longer experienced seizures.

Conclusions. In most patients, autonomic seizures occur late from the acute manifestations of herpetic encephalitis, as an expression of postencephalitic epilepsy, correlated with the recurrence of viral replication or postinfectious autoimmune condition. These focal onset seizures are, typically, refractory to different antiepileptic drugs, but in the present case they were responsive to monotherapy.

Epileptic manifestations and therapeutic approach in a case of temporal cavernoma

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Introduction. Cerebral cavernomas (CC) are vascular malformations characterized by progressive growth and recurrent bleeding. The most common symptoms that determine patients to come in emergency room are focal epileptic seizures, with or without secondary generalization. These usually occur in mesiotemporal or supratentorial CC.

Case presentation. A 40-year-old man reports the onset of symptomatology at the age of 15 through an episode of loss of consciousness. Subsequently, he presented generalized tonic-clonic seizures (GTCS), for which he received FB, and then VPA and CBZ (2010) as antiepileptic treatment.

In the last 4 years (2014-2018), epileptic manifestations have evolved into several types of seizures – focal with impaired awareness and motor automatisms, focal with impaired awareness and autonomic phenomena (nausea, hypersalivation, tachycardia, polypnea). Upon increasing the VPA dose, a postural tremor of the hands occurred; afterwards, gradual replacement of the VPA-CBZ with LTG-LEV combination was decided. Even these antiepileptics are currently unable to control temporal lobe seizures, although they have been administered at maximum doses.

Cerebral MRI examination showed a 15.5 mm cavernoma in the postero-medial region of the left temporal lobe, a sensitive area for eventual surgical intervention.

Conclusions. Evolution of epileptic seizures in mesiotemporal cavernomas is severe, with a major impact on quality of life. Management of this type of symptomatic epilepsy is difficult – drug therapy has low efficiency, and neurosurgical indication is relative, due to the increased risk of neurological complications.

Myoclonic status, early onset, at a patient with Creutzfeldt-Jakob disease

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Introduction. Creutzfeldt-Jakob disease is a rare neurodegenerative disease caused by prions, with an annual incidence of 1-2 cases from 1 million persons. In the most cases, it appears spontaneously, having a mean age of 65. Clinically, Creutzfeldt-Jakob disease is characterized by rapidly progressive dementia, diffuse myoclonic spasms, vision disturbances, jerky movements and a fulminant evolution.

Case presentation. We present the case of a patient T.G., 64 years old, coming from rural environment, who is known with posttraumatic blindness, asthma, while the life conditions revealed a chronic alcohol abuse. The patient is included on the ward for myoclonic status, with traumatic mark at the level of the tongue, spontaneous micturition, respiratory arrest which implied orotracheal intubation in the emergency room. Few months earlier, the patients presented memory impairment, behavioral changes, fatigability, prodromal symptoms which were considered by the family a consequence of ethanolic abuse, without being clinically evaluated.

The blood test (biochemistry, HIV serology, hepatitis B, C and syphilis testing) were negative. The EEG shown specific changes with triphasic wakes, the MRI and elevated levels of 14-3-3 protein were essential to support the diagnostic. The patient evolution was negatively expected. Even though the crisis has stopped, the patient remained comatose. He died of respiratory arrest after 20 days from the follow up on the ward.

Conclusion. The main feature of this case is the present of epileptic status, with generalized myoclonus, as early onset at a patient with Creutzfeldt-Jakob disease.

Keywords: Creutzfeldt-Jakob disease, myoclonic status, triphasic wakes, 14-3-3 protein, fulminant evolution

Pontine cavernoma presenting with consecutive hemorrhage and ischemic stroke in the brainstem – case report

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Background. Brainstem cavernous malformations (BCM) have a high rate of bleeding and carry an increased rate of neurologic morbidity and mortality. The treatment strategy in a case of a patient with symptomatic BCM who developed after pontine hemorrhage an ischemic stroke in the brainstem it is challenging.

Case description. A 42-year-old men, with no medical hystory, developed suddenly facial numbness, peripheral facial palsy, internuclear ophtalmoplegia (INO), right hemiparesis grade 2/5 MRC and the Glasgow coma score in ED was E2M5V3. The CT scan showed a massive pontine hemorrhage with intraventricular extension. A brain magnetic resonance (MR) study, including T1-weighted, T2-weighted, gradient echo scans and MR angiography revealed a pontine cavernoma with hemorrhage. On medical treatment he slowly recovered regaining independent ambulation, but with persistent INO, peripheral facial palsy and right spastic hemiparesis grade 4/5 MRC.

Seven months later he developed suddenly vertigo, postural instability, truncal ataxia, left upper extremity dysmetria, right hemihypoesthesia, dysartria and dysphagia. Initial brain CT and angio-CT scan were normal. MR showed an acute left dorsolateral medullary infarct and pontine cavernous malformation with dark hemosiderin ring at the periphery of lesion on T2 and gradient echo sequences. Carotid and vertebral Doppler echography were normal. A thorough work-up for underlying

trombophilia, vasculitis or infections were normal. Echocardiography was normal. He was discharged to rehabilitation 14 days later with residual INO, left dysmetria and right hemiparesis, on antiplatelet therapy.

Conclusion. This case illustrate that BCM can present with a highly variable clinical course due to their dynamic nature and also the complex implications in management of these patients.

Contactin-1(CNTN1) and contactin-associated protein 1 (CASPR1) IgG4 complex antibodies in a patient with sensory ataxia in chronic inflammatory demyelinating polyneuropathy

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Introduction. Chronic inflammatory demyelinating polyneuropathy (CIDP) is a rare, clinically heterogeneous, autoimmune but potentially treatable condition. Recently, autoantibodies against paranodal proteins like contactin-1 (CNTN1), contactin-associated protein-1(CASPR1), and neurofascin have been described in patients with inflammatory neuropathies. IgG antibodies against these proteins may guide treatment in these patients.

Case report. We present the case of a 48 years old male patient who presented in our department with acroparesthesia, diplopia and gait disturbance. Clinical assessment and work-up suggested Guillain-Barré syndrome (GBS). At this point, we ruled out other etiologies for GBS. We started treatment with immunoglobulins. The response was initially favourable but the patient had several relapses until he developed severe sensory ataxia with findings consistent of subacute onset CIDP. Ultimately, we did monthly courses of corticosteroids, cyclophosphamide and immunoglobulins until we discovered that the patient was positive for IgG4 antibodies against CNTN1/CASPR1 complex. We started the patient on rituximab with a favourable response.

Conclusions. Anti-CNTN/CASPR1 mediated paranodopathy comprises a new subgroup of autoimmune peripheral neuropathy with a distinct clinical phenotype. Testing might be warranted in patients with acute/subacute-onset of severe sensorimotor peripheral neuropathy for better immunotherapy.

Spinal meningeal diverticula, spontaneous intracranial hypotension and superficial siderosis or subdural hematoma? – Case report

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Introduction. Superficial siderosis (SS) is a rare disorder characterised by depositions of hemosiderin in the leptomeninges and subpial layer. Spontaneous spinal CSF leak is found in 1/3 of patients with SS. Spontaneous intracranial hypotension is characterised by the classic triad of low cerebrospinal fluid (CSF) pressure, orthostatic headache, and diffuse pachymeningeal enhancement.

Case report. We report the case of a 32 years old female patient who presented in our department complaining of frontal headache that would aggravate with upright posture and improve with horizontal positioning. The neurological examination was normal. The first brain MRI raised the suspicion of chronic fronto-temporal subdural hematoma along with diffuse pachymeningeal enhancement. The radiologist instinctually referred the patient to the neurosurgeon who recommended surgery. We did repeated brain imaging studies, and full spinal MRI. We found a CSF leak at the ventral epidural space at C6-T1 along with meningeal diverticula at T11-T12 and Tarlov cysts. The symptoms resolved with bedrest, hydration and caffeine.

Conclusions. Spontaneous intracranial hypotension can be a challenging condition to diagnose. Radiologists should be aware of the myriad clinical presentations of this disease and the imaging pathway that can ultimately define the etiology.

Claude Bernard Horner syndrome after a thyroid nodule's ecotherapy

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Ecotherapy is a type of treatment that uses HIFU (High Intensity Focused Ultrasound). HIFU therapy uses transcient hyperthermia to produce tissue necrosis by coagulation of the target tissue. Because tissue destruc-

tion occurs with the temperature increase is considered to be thermal ablation.

We present the case of a 28 years old women who was treated with HIFU for a right thyroid lobe nodule. Immediately after procedure, the patient accuses diminishing visual acuity in the right eye, narrowing of the right palpebral spine, eyelid and conjunctival hyperemia.

Initially, the patient was diagnosed with conjunctivitis and then she came to Neurology Department. The signs of CBH syndrome were evident: right palpebral ptosis, endophtalmia, miosis. Also we observed a inflammatory formation situated in the right laterocervical region.

The patient was recommended head and neck MRI. No changes were observed at the head but the thyroid nodule was described as having intense and non-homogeneous contrast nodes showing discreet diffusion restriction as well as lymph nodes and enlarged submandibular lymph nodes with inflammatory aspect were described.

Under nonsteroidal anti-inflammatory treatment and vitamin supplements, the evolution was positive, regressing the symptomatology after 10 days.

The particularity of the case lies in its uniqueness, the CBH syndrome after HIFU never been reported.

Unilateral inferior altitudinal hemianopia – clinical case

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Introduction. Altitudinal hemianopia is the absence of the superior or inferior visual hemifield. The most common causes of altitudinal hemianopia are: optic neuritis, anterior ischemic optic neuropathy and compression (optic nerve meningioma, glioma).

Methods. Patient B.A., 56 years old, without a significant pathological personal history, smoker, without home medication, presents a recently installed left eye disorder for which he requests an ophthalmological consultation. The visual field exam established the diagnosis of inferior altitudinal hemianopia with the recommendation of a neurological examination.

Results. Neurological examination at 3 weeks after the onset of symptomatology reveals amputation in the horizontal lower field and horizontal nystagmus.

The cerebral CT examination reveals a spontaneous hyperdense lesion that presents reports with optic chiasm, hypothalamo-pituitary stalk and left mean cerebral artery, suggestive aspect for voluminous meningioma on the small sphenoidal left wing. The cerebral MRI exam, with contrast substance, highlights an extranevraxial expansive process that involves the intracranial optic nerve segment, the left half of the optic chiasm, the left optic tract and the supraclinoid segment of the left ACI.

Discussion. The presumptive diagnosis was anterior ischemic optic neuropathy (AION), but the brain imaging investigations led to the diagnosis of voluminous meningioma of the small sphenoidal wing. The particularity of the case is represented by the sudden and unilateral debut of the symptomatology that guides the diagnosis to AION and also the rarity of this type of presentation for a meningioma.

Keywords: altitudinal hemianopia, meningioma, AION, optic chiasm

Prognostic factors in aneurysmal subarachnoid hemorrhage

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Introduction. Non-traumatic aneurysmal subarachnoid hemorrhage is an extravasation of blood into the space between the arachnoid and pia, most often caused by a rupture of a saccular or a blister-like aneurysm.

Objectives. To outline negative prognostic factors and the occurence of complications secondary to the pathology itself, as well as to its therapy.

Materials and methods. We performed a retrospective study on the pacients diagnosed with aneurysmal subarachnoid hemorrhage in our Neurology Department during the last 3 years.

Results. We included 52 patients (34 females, 18 males), with the median age of 54.5 years.

16 patients were treated by surgery – aneurysm clipping, 24 patients received endovascular treatment and 12 patients were managed with medical treatment alone. Overall mortality was 36.54%.

Endovascular treatment correlated negatively with mortality ($p = 0.009$, O.R. = 0.173, CI 95% (0.047, 0.639)).

An aneurym diameter of less than one centimeter also correlated with lower mortality rates (p = 0.01, O.R. = 0.123, CI 95% (0.025, 0.602)).

A Hunt & Hess score higher than 2 was associated with higher mortality (p = 0.002, O.R.= 27.69, CI95% (3.28, 233.3)). Leukocytes level higher than 15,000/mm^3 on admission was also associated with greater mortality risk.

Conclusions. Aneurysmal subarachnoid hemorrhage has high mortality rates (36.54% in our group of patients). A Hunt & Hess score higher than 2, as well as a leukocytes level higher than 15,000/mm^3 are predictive factors for early mortality.

Endovascular coiling therapy in selected patients is associated with improved outcome.

Etiopathogenic mechanism of acute ischemic posterior circulation stroke in subclavian artery steno-occlusive pathology associated with steal syndrome

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Introduction. The subclavian steal syndrome is a pathology that results from the stenosis or occlusion of the subclavian artery proximal to the origin of the vertebral artery.

Based on angiography as the gold standard, a brachial systolic pressure difference higher than 15 mmHg is highly specific for the diagnosis of subclavian stenosis.

It is usually asymptomatic, but some patients present with ipsilateral upper limb ischemic symptoms and neurological deficits.

Objectives. We aim to present the clinical and imagistic particularities of subclavian steal syndrome associated with ischemic stroke in vertebrobasilar territory, based on a case series.

Materials, methods and results. Clinical evaluation revealed radial pulse asymmetry and brachial systolic pressure difference. Cerebral imaging (MRI or CT) revealed posterior circulation acute ischemic stroke. Neurosonological evaluation showed subclavian artery stenosis, proximal to the origin of the vertebral artery and subclavian steal phenomenon, confirmed by cerebral angiography.

Conclusions. Brachial systolic pressure difference higher than 15 mmHg is specific for subclavian artery stenosis.

Patients with subclavian steal syndrome can develop ischemic stroke in posterior circulation due to hemodynamic or arterio-arterial embolism mechanism.

Surgical or endovascular therapy is required to increase the cerebral blood flow in the posterior territory.

Limbic encephalitis associated with VGKCS: A diagnostic challenge

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Limbic encephalitis associated with anti–voltage-gated potassium channel complex (VGKCC) antibodies is an autoimmune form of encephalitis that is responsive to immunotherapy. Clinical presentation can vary, but patients diagnosed with limbic encephalitis typically present cognitive impairment, seizures and psychiatric manifestations. The disorder may be underdiagnosed due to the lack of knowledge and the limited availability of diagnostic tests.

We present the case of a 52-year-old male, with history of smoking, hypertensive, who suddenly develops speech understanding impairment, the case being interpreted at first as left hemispheric ischemic stroke. After admission the patient is presenting aggravation of neurological condition, confusion, fever, and focal left hemiclonic seizures. Lumbar puncture revealed 150 white blood cells/ul and elevated protein levels, which arises the suspicion of an acute viral meningoencephalitis (patient is admitted to Infectious Diseases County Hospital). Cerebral MRI scan shows bilateral fronto-temporal T2 and FLAIR hypersensitivity and leptomeningeal contrast-enhanced images which include the entire limbic system. Corticotherapy, antibiotic and antiviral therapy are initiated with a slight improvement of the symptoms, and the diagnosis of viral herpetic meningo-encephalitis is established. Four months after discharge, the patient is admitted to the Tg. Mures Emergency County Hospital, Neurology I Department, with a clinical picture dominated by psychomotor agitation, aggressiveness, headache and speech understanding impairment. We proceeded to further investigations with cerebral computed tomography exam, which revealed spontaneous left-sided temporo-parietal hypodensity, without edema, negative cervical duplex ultrasonography of carotid and vertebral arteries, negative infectious

panel (HIV, VDRL) and autoimmune panel with positive voltage-gated potassium channels.

The diagnosis of limbic VGKC antibody-associated encephalitis was made only after several false leads. In a patient without history of psychiatric illness, this condition should be considered and the antibodies should be checked early because the treatment may prevent mortality associated with intractable seizures and electrolyte disturbances.

Posterior reversible encephalopathy syndrome (PRES) associated with eclampsia and pre-eclampsia: Case series

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Posterior reversible encephalopathy syndrome (PRES) is a clinical-radiological entity which manifests with visual symptoms, impaired consciousness, seizures and headaches. Most frequently it's associated with eclampsia and pre-eclampsia, which lead to a secondary vasogenic cerebral oedema. As the name suggests, PRES is reversible once the trigger factor is removed.

We present a series of three cases with acute onset of tonic-clonic seizures in pregnant/post-partum patients.

A 19-year-old patient with a 38 weeks pregnancy and a 32-year-old patient with a 33-34 twin pregnancy were diagnosed with pre-eclampsia, based on their high blood pressure and proteinuria, subsequently undergoing C-section. After the surgery they presented two, respectively one tonic-clonic seizures. The first patient's head CT and MRI revealed multiple lesions in both cerebral hemispheres with inflammatory characteristics. The head CT of the second patient revealed two hypointense lesions in the right occipital and left frontal lobes.

The third patient was a 20-year-old woman on her 36-37 weeks pregnancy who has been admitted in the gynaecology ward with the diagnostic of eclampsia after she presented a tonic-clonic seizure associated with high blood pressure. An emergency C-section was performed. Head CT was negative and the brain MRI revealed multiple hyperintense lesions in both frontal and parietal lobes. After treatment with magnesium-sulfate, metildopa, diazepam and antioedematous agents, all patients presented complete resolution of the symptoms.

Conclusion. In patients newly diagnosed with pre-eclamsia/eclampsia who develop neurological manifestation, PRES diagnosis should always be considered, due to the complete reversibility of the symptoms once the correct treatment is instituted.

Impaired intracerebral perivascular amyloid Aß40 drainage after aquaporin 4 inhibition

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One of the pathological hallmarks of Alzheimer's disease is the accumulation of amyloid Aß peptide as plaques in the brains of these patients, mostly due to the blocking of its clearance from within the parenchyma. Most of the soluble Aß peptide are drained along the capillary basement membranes. Most important pore channel that facilitates water diffusion around blood vessels in the brain is aquaporin 4 (AQP4), which is found in the perivascular astrocyte end-feets.

In this study we have followed the influence of blocking the AQP4 channel on the clearance of soluble Aß40 from the cerebral parenchyma. Seven 3.5 months old C57BL6 female mice were injected with 0.5 µl of fluorescently labelled Aβ40 in the cerebral cortex, and the difussion of the dye was followed live with a two-photon microscope (Zeiss LSM 7MP). Before the injection, 4 animals received a unique intraperitoneal dose of the AQP4 inhibiter TGN-020. In order to visualize the blood vessels, all the animals were also injected in the tail vein with sulforhodamine.

For 20 minutes Aβ diffused and drained along the blood vessels. The peptide was localized around penetrant cortical arteries and large arteries in both experi-

mental setups, however, for the treated animals the signal colocalised especially with smaller deep vessels and persisted for longer times compared to untreated animals. Histopathology confirmed an unsignificant increase in the thickness of the basement vascular membranes, showing that the treatment did not induce any morphological change by itself.

Our results show that inhibition of AQP4 decreases Aβ40 clearence along vascular basement membranes, especially at the level of the small vessels.

Phenotypic changes of aquaporins 1 and 4 in ischemic stroke

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Aquaporins (AQP) are a water channel protein family which regulate water homeostasis through the body. AQP4 and AQP1 are essential for water diffusion in the brain in normal and pathological conditions. AQP4 is primarily located in astrocytes' end-feets and extends throughout the astrocyte membranes, and AQP1 has been documented in the choroid plexuses, blood vessels, some astrocytes and rare neurons. Despite this, not much is known about the colocalisation of the two proteins, and their relationship with the blood vessels and the astrocytes cytoskeleton.

In the present study we utilized pathological CNS tissue obtained at necropsy from 7 ischemic stroke patients and 4 age control individuals, after being granted with signed informed consents from the caretakers or the patients' relatives. Double and triple immunofluorescence was performed for anti-AQP1/AQP4 antibodies in association with markers for astrocytes (GFAP), neurons (NeuN) and blood vessels (CD31 and collagen IV). All captured images were processed for spatial deconvolution in order to render visible only the signals coming from a single optical slice.

Ischemic cortical regions showed a much higher frequency of AQP4/AQP1 signals in close perineuronal areas as compared to controls, suggesting a shift of AQP4 towards the neuronal compartment in ischemic lesional states. Moreover, AQP1 seems to be shifting from the vascular compartment towards the neuronal compartment. This suggests that in ischemic stroke at least, both aquaporins concentrate on buffering water around the neuronal compartment, rather than around the vascular component.

A fatal case of chronic inflammatory demyelinating polyneuropathy with an atypical onset and recurrence – case report

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Introduction. Chronic inflammatory demyelinating polyneuropathy (CIDP) is an acquired imuno-mediated inflamatory disease of the peripheral nervous system that shares similarities with the acute inflammatory demyelinating polyneuropathy (AIDP). Clinical severity and routine nerve conduction studies may be similar both in CIDP and AIDP. AIDP is characterised by a monophasic course with maximum of severity in four weeks from the onset while CIDP has a gradual progression over eight weeks with periodic relapses. About 16% of CIDP patients present an acute onset characterised by a rapid progression that may be misinterpreted as AIDP.

Material and method. A 57-year-old female was admitted to the neurology department for a rapidly progressive flaccid paraplegia over the course of five days and acute respiratory inssuficiency which required mechanical ventilation after two days of hospitalisation. Five months prior to this episode she experienced similar milder symptoms being diagnosed with AIDP for which she received immunoglobulins with good recovery.

Results. Intravenous immunoglobulins were administered from the first day but without significant improvement of the motor deficit or respiratory distress. Corticotherapy was associated but the pacient developed pneumonia, sepsis and multiple system organ failure which ultimately was fatal.

Conclusions. The distinction between patients with AIDP from those with acute onset CIDP is a challenging

problem. The early administration of immunotherapy makes the diagnosis even more difficult because the therapy initiated in the early phase of CIDP may prevent the progression. However, an early and accurate diagnosis has prognostic significance and therapeutic implications which is why we take into account to perform monthly seriated routine nerve conduction studies in the first year as a diagnostic tool in the absence of a precise biomaker for the differential diagnosis, because a maintenance treatment for those with acute onset of CIDP may prevent subsequent relapses with fatal potential.

Different neurological manifestations of Lyme disease – two case reports

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Introduction. Lyme disease is an infectious disease with systemic damage that is produced by *Borrelia burgdorferi* spirochete which is transmitted to humans by tick bite. Also known as "the disease of one hundred faces" it mimics various pathologies and manifests itself differently from one person to another, which further complicates the diagnosis in the absence of a certain hystory of tick bite.

Material and method. A 55-year-old female was admitted to the neurology department for a progressive motor deficit and parestesia in the lower limbs which started one week prior. Nerve conduction studies evidenced an axonal form of polyradiculoneuritis and comprehensive investigations were done leading to the diagnosis of Lyme disease.

The second patient was a 73-year-old female with altered consciousness, Glasgow Coma Scale (GCS) 11 points, nuchal rigidity and intermitent seisures. She had a history of joint pains which were considered to be rheumatoid arthritis. The electroencephalography evidenced a disrithmic activity with increased incidence of theta waves on the anterior derivations and the brain MRI evidenced a few milimetric ischemic lesions.

Positive titres for IgM *Borrelia burdogferi* were found in serum for both patients. Corticospinal fluid (CSF) presented positive antibodies for the first patient with increased protein level for the second patient but further analyses were not available. None of our patient mentioned a previous tick bite and were not aware of the presence of an erythema migrans.

Results. The patients were treated with intravenous ceftriaxonum and clinical signs regresed with further favorable evolution.

Conclusion. Our report can distinguish two clinical presentationes with peripheral nervous system involvement with acute polyradicuoneuritis with axonal loss and central nervous system involvement with meningoencephalitis and epileptic seizures. Lyme disease still makes victims and therefore we have to keep it in mind in the differential diagnosis of neurological diseases because an appropiate and early treatment can lead to complete recovery of the patient.

Neurological manifestations of Takayasu disease – Case reports

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Takayasu srthritis (TA) is a rare chronic inflammatory disease that occurs predominantly in young women. It is characterized by granulomatous vasculitis of the aorta and large branches and causes stenoses, occlusions or aneurysms in the affected arteries. We present two cases of TA with different clinical manifestations.

Case 1. 42-year-old patient presents sudden onset of left-sided motor deficit. Clinical examination reveals marked blood pressure difference between upper limbs and absence of peripheral pulse in the upper right and inferior limbs. Computed tomography angiogram (Angio-CT) describes thrombosis of brachiocephalic artery, right common carotid artery (CCA) and proximal half of right subclavian artery (SA). With anticoagulant, statin, hypotensive and antiplatelet therapy, the patient presented a favorable progression of neurological deficits (grade 4 left hemiparesis on discharge).

Case 2. 47-year-old patient presents a 14 year history of subfebrility, fatigue, weight loss, palpitations, and episodes of loss of consciousness. At disease onset, arteriographic examination reveals occlusion of left SA at 1 cm from the origin, with a left-sided steal syndrome. Symptomatology improved with corticotherapy and

subclavicular-carotid by-pass was performed, however, symptoms reoccur after 10 years. At presentation, clinical examination reveals blood pressure difference between upper limbs. Angio-CT shows circumferential thickening of the aortic arch and proximal structures of the aortic arch, 70-80% stenosis of left CCA, left SA occlusion and permeable left subclavicular-carotid by-pass.

With hypotensive, double anti-platelet aggregation and statin treatment the patient had a favorable evolution.

Conclusions. Takayasu arthritis is a subdiagnosed condition, it can start with minor symptoms or with stroke.

Correlation between limited etiological investigations of ischemic stroke and secondary prevention with anticoagulants

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Determining the etiology of ischemic stroke implies general and neurological investigations which extend over the first hours and days from the occurrence of the stroke. Depending on the etiology, a recurrent stroke may occur and have a severe clinical form. The secondary prevention with both oral and parenteral anticoagulants, if there are no contraindications, will avoid the recurrence of the ischemic stroke until the time of a certain etiological diagnosis that would impose such a therapy.

Material and method. I performed a prospective study which included 135 patients with emergency hospitalization in Neurology Clinic I during 2015, diagnosed with ischemic stroke by the same neurologist. 87 (66,44%) of the patients had sinus rhythm, 10 of them presented with paroxysmal atrial fibrillation (AF) and 38 had permanent AF. 55 (40.74%) of the cases have not been completely investigated, from which 31 had presented with permanent AF and 3- paroxysmal AF. 8 of the patients in sinus rhythm had an arterial occlusion, but 21 (24.13%) of them did not have vascular investigations. Among the AF cases, only one case (2.08%) presented and extracranial occlusion. Secondary prevention with antiplatelet therapy only was followed by a single patient, VKA therapy was found in 12 patients (8.88%), and 62 (45.92%) had NOAC therapy. 52 of the cases received Sulodexide, and 8 of them, a low molecular weight heparin therapy. During the period of secondary prevention with anticoagulants none of the patients presented recurrent strokes.

Conclusions. The post ischemic stroke anticoagulant prevention is required only temporary, in patients with no documentation for AF, especially in those who have risk factors for paroxysmal arrhythmia, those insufficiently investigated and patients with vertebrobasilar ischemia.

Optimized clinical criteria for the emergency treatment of ischemic stroke (thrombolysis) – NIHSS adjustment to vertebrobasilar ischemic stroke semiology

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Systemic thrombolysis has obviously occupied the first place, chronologically speaking, in the emergency treatment of ischemic stroke in patients who meet the eligibility criteria in terms of timing, clinical and paraclinical aspects. Certainly, in the era of modern neuroimaging, with performant technologies which are also available in emergency situations, launching a proposal to optimize the clinical requirements for thrombolysis in vertebrobasilar ischemic stroke seems anachronic, but I would still present some arguments: due to the increased incidence of type II diabetes, the incidence rates of vertebrobasilar ischemic stroke have also raised significantly – it is a known fact that diabetic patients will develop vertebrobasilar stroke more frequently than non-diabetic patients; there is a disadvantage in meeting the criteria for thrombolysis in vertebrobasilar strokes, in terms of clinical semiology – distinct clinical signs which are evident after a first simple examination, as long as invalidity, if the patient survives – are not quantified in NIHSS; the risk of hemorrhagic transformation of an infratentorial stroke, including post-thrombolysis period, is minimal. The following clinical signs of ischemia are proposed to be included in NIHSS, vertebrobasilar territory: nystagmus, acute cophosis, dysfunction in swallowing and coordination – astasia-abasia, involuntary movements (thalamus), vegetative symptoms as long as a psycho-organic component. If the proposals are relevant and applicable, new series of comparative studies could be approached: the number of cases of ischemic vertebrobasilar stroke eligible for thrombolysis selected with NIHSS versus NIHSS ver-

tebrobasilar (NIHSS VB); the benefits of thrombolytic therapy in terms of invalidity and mortality – initial NIHSS versus NIHSS at the moment of discharging the patient; the complication rate and hemorrhagic transformation rate in vertebrobasilar strokes post-thrombolysis, selected using NIHSS versus NIHSS VB; the advantages of the therapy in vertebrobasilar ischemic stroke after thrombolysis versus vertebrobasilar ischemic stroke with the same initial NIHSS VB, but without thrombolysis; the benefits of fibrinolysis in vertebrobasilar stroke versus carotid stroke.

My blood pressure is high. So what? Poor knowledge about risks associated with uncontrolled hypertension among patients with intracerebral hemorrhage

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Introduction. Elevated blood pressure is a major risk factor for intracerebral hemorrhage. We aimed to assess how many patients hospitalized for intracerebral hemorrhage (ICH) had a known history of arterial hypertension and how many were regularly taking antihypertensive drugs prior to stroke onset.

Methods. We collected clinical, imaging and past medical history data for 58 patients hospitalized in our department with ICH attributed to hypertensive vasculopathy. Most probable ICH etiology was established according to SMASH-U criteria.

Results. Mean age of the patients was 69.2 +/- 12.2 years and 58.6% were males. Median NIHSS score at admission was 14 (25-75 IQR: 7-25). 44.8% of the patients died during hospitalization and 62.5% of the survivors had a 3-month modified Rankin score greater than 2. 72.4% of these patients had a known history of hypertension but only 39.6% were regularly taking antihypertensive medication at home. Patients who were not taking prior antihypertensive treatment were younger (mean age 65.9 +/-12.1 versus 74.2 +/- 11.2 years, p = 0.01) and more frequently males (76.4% males versus 37.5% females, p = 0.002).

Conclusions. Public awareness about health-related risks associated with uncontrolled hypertension seems to be poor among Romanian patients with intracerebral hemorrhage and the consequences are frequently devasting. Further studies aimed to evaluate general knowledge about hypertension and educational campaigns targeting high-risk population are urgently needed in Romania.

Predicting factors of i.v. rtPA in pacients with acute ischemic stroke

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Introduction. Cerebro-vascular disease, mainly ischemic stroke, is a major cause of morbidity and mortality in Romania, improving the therapeutic outcome being of an utmost interest.

Objective. Our study looks for reliable clinical and paraclinical factors that might correlate with prognosis as measured by the mRS (modified Rankin Scale) in patients with acute ischemic stroke treated with i.v. rtPA alteplase. The practical utility of this study would reflect in better assessing the clinical evolution and prognosis of these patients.

Methods. A regression model of analyses was created using the following parameters: NIHSS (National Institutes of Health Stroke Scale) at admission, after 24 hours and 7 days from stroke onset respectively; the ASPECTS (Alberta Stroke Program Early CT Score) initially and after 24 h, the presence of diabetes in these pacients and the mRS value at 7 days after rtPA treatment.

Results. A group of 82 patients (aged 32 to 88, 53 males (64.6%) and 29 females (35.4%)) was studied. The regression model used showed a statistical significant correlation between the mRS value and the NIHSS value at 24h post thrombolysis (a decrease of NIHSS with 10 points correlates with a decrease of mRS with 1.75 points ($p < 0.05$)), between the presence of diabetes and an increase in mRS with 0.877 points ($p < 0.05$) and between the ASPECTS value at 24 h and the mRS (an increase in mRS with 0.332 for every point lost in the ASPECTS score ($p < 0.05$)).

Conclusion. The validation of this regression model could be an important tool for early assessing the prognosis of the patient.